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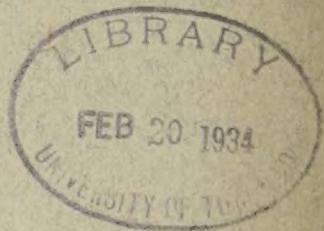
VOL. III

NO. 1

CONFERENCE ON HOSPITAL STANDARDIZATION

Joint Session of Committees on Standards

- I. Hospitals as They Are.
- II. What the Profession of Medicine Wants
in Hospitals.
- III. Approach to Hospital Standardization.
- IV. Committees on Standards.



AMERICAN COLLEGE OF SURGEONS
25 EAST WASHINGTON STREET, CHICAGO

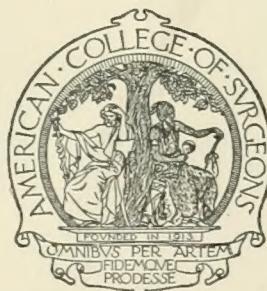
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BULLETIN
OF THE
AMERICAN COLLEGE *of* SURGEONS

VOL. III

NO. 1

CONFERENCE ON HOSPITAL STANDARDIZATION
JOINT SESSION OF COMMITTEES ON STANDARDS
CHICAGO, OCTOBER 19-20, 1917



AMERICAN COLLEGE OF SURGEONS
25 EAST WASHINGTON STREET, CHICAGO

CONTENTS

| | |
|------------------------|---|
| INTRODUCTION | I |
|------------------------|---|

HOSPITALS AS THEY ARE

| | | |
|---|---|----|
| The Hospital Problem of Today—What Is It? | DR. JOHN A. HORNSBY Editor, Modern Hospital, Chicago | 4 |
| The Hospital and Its Community | DR. EDWARD MARTIN Professor of Surgery, University of Pennsylvania School of Medicine | 12 |
| Discussion of Papers by DR. JAMES E. MOORE, Minneapolis; DR. EDWARD P. DAVIS, Philadelphia; DR. EDWARD JACKSON, Denver; DR. ANDREW S. LOBINGIER, Los Angeles; DR. WILLIAM H. WILDER, Chicago; MR. DANIEL D. TEST, Philadelphia; DR. PHILANDER A. HARRIS, Paterson; DR. HORACE G. WETHERILL, Denver; DR. ARTHUR DEAN BEVAN, Chicago; and DR. EDWARD EVANS, LaCrosse. | | |

WHAT THE PROFESSION OF MEDICINE WANTS IN HOSPITALS

| | | |
|--|--|----|
| Organization and Efficiency | DR. JOHN YOUNG BROWN Professor of Surgery, St. Louis University School of Medicine | 17 |
| The Hospital Laboratory | DR. FRANCIS C. WOOD Director of Laboratories, St. Luke's Hospital, New York | 20 |
| Case-records and Their Value | DR. ERNEST A. CODMAN Head of Codman Hospital, Boston | 24 |
| The Hospital as an Educational Center | DR. ALLEN B. KANAVEL Professor of Surgery, Northwestern University Medical School | 27 |
| The Trained Nurse | MISS ANNIE W. GOODRICH Associate Professor, Teachers College, Columbia University | 30 |
| Discussion of Papers by DR. ROBERT L. DICKINSON, Brooklyn; DR. J. GARLAND SHERRILL, Louisville; DR. JOHN A. HORNSBY, Chicago; DR. EDWARD N. BRUSH, Towson, Maryland; DR. FREDERICK W. ZIMMER, Rochester; DR. CLEVELAND H. SHUTT, St. Louis; DR. A. J. OCHSNER, Chicago; DR. HENRY H. SHERK, Pasadena; DR. GEORGE H. SEXSMITH, Bayonne; DR. F. GREGORY CONNELL, Oshkosh; and DR. R. W. CORWIN, Pueblo | | |

APPROACH TO HOSPITAL STANDARDIZATION

| | | |
|--|---|----|
| On Behalf of the American Hospital Association | MR. ASA S. BACON Superintendent, Presbyterian Hospital, Chicago | 41 |
| On Behalf of the Catholic Hospital Association | FATHER C. B. MOULINIER, S. J. President, Catholic Hospital Association, Milwaukee | 41 |
| The Medical Schools and Hospital Standardization | DR. E. P. LYON Dean, University of Minnesota Medical School | 45 |

COMMITTEES ON STANDARDS

| | |
|---|----|
| Personnel by States and Provinces | 52 |
|---|----|

CONFERENCE ON HOSPITAL STANDARDIZATION

JOINT SESSION OF INTERNATIONAL, STATE AND PROVINCIAL COMMITTEES ON STANDARDS, CHICAGO,
OCTOBER 19 AND 20, 1917

HOSPITAL standardization during the last ten years has been much discussed in the medical profession and among hospitals. During this period such a project has steadily won favor; in fact, due chiefly to the American Medical Association and to the American Hospital Association, the need of it is now almost universally conceded. Already hospital standardization has found expression in Pennsylvania and New Jersey. But the first continent-wide plan of action in this field was announced by the Regents of the American College of Surgeons in 1913 soon after the organization of the College and that plan of action is now a reality.

This bulletin of the College contains the papers of the first Conference of the International and State Committees on Standards held in Chicago on October 19 and 20. It gives also, in part, the discussions which occurred in connection with the papers then presented. And in these introductory pages is given a brief summary of the outcome of the Conference.

Although a program of hospital standardization was announced by the College in 1913, the Regents of the College at that time could not take up the project. Necessarily they turned their attention, first, to the organization of strong Credentials Committees in each province of Canada, and in each state of the Union. A second task was to secure a sound financial basis for the College. But when in 1916 these two objects were fairly accomplished, the Regents asked the Fellows of the College to elect committees from their own number in their respective states who were most thoughtful on matters of educational standards.

The purpose of these committees was not only to guide, but also to put into action the standardization project. It was the intent of the Regents as soon as these committees

were elected to call them together and with them to act. Delay in this plan, however, was caused by the war and the committees were not called together until October, 1917. About 60 leading hospital superintendents met with the committees at that time.

At this conference the problem of standardization was approached, first, from the angle of actual hospital data; the number of hospitals, their distribution, their classification, the number of beds, the investment, etc. Together with these data came also some thought as to the relation of these hospitals to the society served by them. The second division of the program had to do with what the profession of medicine wants in hospitals. Under this division were considered efficiency and management, the hospital laboratory, case-records and their value, and the responsibility of the hospital toward medical research and in the training of interns and of nurses. The last two sessions of the program were devoted to the ways and means toward action. In this connection the viewpoint of the American Hospital Association, of the Catholic Hospital Association, and of the medical schools was each presented and discussed.

WHAT THE CONFERENCE DID

The outcome of the conference in general terms was as follows:

First, the idea of organized standardization advanced among those present from a mere intellectual conception into real enthusiasm. Second, the interest in the project was shared by hospital administrators, whether they came from little hospitals or from great hospitals, as well as by physicians and surgeons. Third, the proper care of the patient was, throughout all of the papers and discussions, held as the test of efficiency in the standardization program. The hospital is for the patient; it is for his convalescence and

HOSPITAL STANDARDIZATION

complete recovery from illness. The right sort of care of the patient, it was emphasized, could be provided in a small hospital as well as in a great hospital. Fourth, time and time again the need of closer co-operation between hospital staffs and hospital trustees was urged, and the need also of strong administrative authority. Fifth, firmness in all procedure and quick action were judged fundamental to successful policy.

Finally, in order to translate the conclusions of the conference into action, a General Hospital Committee composed of 25 members—surgeons, internists, hospital superintendents, laboratory men and other specialists—was appointed to meet in Washington on December 8 and 9. The two purposes of the Committee at this meeting were: First, to revise and to complete the questionnaire upon which data concerning hospitals are to be collected; second, to review and to complete a minimum standard of efficiency which shall be the basis of hospital standardization.

At the first session of the Committee on December 8 the Committee unanimously decided that the minimum standard could not wisely be adopted until a complete survey of hospital data was at hand. The Committee, therefore, turned its chief attention to the questionnaire and that questionnaire is now ready. It will be sent to hospital superintendents, to presidents of the boards of trustees of hospitals, to Fellows of the College, and to others in January. With it will be included some statement of the aims of the College in hospital standardization. And the hospitals will be requested to make full return of the data asked for.

As the data of the questionnaire are returned they will be analyzed according to modern statistical methods. The General Hospital Committee, then, will be in position to decide upon a minimum standard, a standard which shall be reasonable and which at the same time will serve as a test of competent treatment to patients in hospitals.

Beginning early in the year a personal inspection of the hospitals, through the co-operation of the State Standards Committees and of the staff of the College and of the hospitals themselves, is contemplated.

In the closing summary of the conference on October 20, Dr. George W. Crile said in part:

"The first great step toward standardization has been achieved, for those of us who are here have ourselves been standardized. We are a difficult group to standardize, but the thing is accomplished.

"One thing I have learned from this meeting which is more important than anything else is that medical staffs should realize fully that they are public servants; that they are in private practice only in part; and that they owe a duty toward the training of young men in hospitals. They owe a duty to train nurses as well as interns and assistants. It is the duty of medical staffs also to give an insight, to give a spiritual viewpoint to members of their respective boards of trustees in order that the staffs of hospitals and the trustees may work together with all the advantages of strong bonds of co-operation.

"I have listened with great interest particularly to what has been said about small hospitals. So far as I am personally concerned, the standardization that is in our minds here to-day is not the standardization of the great institution. High scientific service in a hospital does not necessitate a large number of beds. It means merely that if a hospital has but one patient and one member of staff, that if the member of staff gives that patient a fair show and a square deal in the way of intelligent treatment, the hospital will meet any standard which we may properly set up. The patient must have the advantage of medical science, the advantage of a laboratory, and the advantage of good nursing.

"I desire to mention a matter that concerns this problem which I learned, much to my advantage, in France. For the first time I spent all of my time each day in a hospital. Heretofore, I have had a great many duties outside of the hospital to take me away from it. In spending my time all day in a hospital I had excellent opportunity to see more closely the things that make for real success. I do not believe that we as surgeons realize how little attention we actually give to our own hospitals. I did not realize it, at least.

Now I know that there must be a whole ocean of things going on in my own hospital that I should concern myself about.

"And not only should we concern ourselves about our hospitals, but to a greater extent we should concern ourselves about our trustees. We should interest them in such a fashion that they will come gladly to the meetings and that they will give us their most careful judgments on the intricate problems that arise. We must have, all of us, one set of ideals throughout all departments.

"We are now at the beginning of a tremendous expansion in altruism, and of a keener understanding of our duties toward the community. The success of the whole project lies within ourselves."

During the last session of the conference Dr. William D. Haggard, Nashville, especially struck home the part which the State Committees on Standards must play in the project. He said in part:

"I make final appeal to you, individually, that when you go back home you have frequent meetings of your committees and that you present this whole matter to your various medical societies, and particularly to the members of your governing boards, and to the people of your communities. Hospital trustees are kindly people, but they do not actually give the same active and intensive interest to the hospital problems with which they are charged that they give to their individual business. The fault lies largely with the profession. The doctors have not educated the trustees to their duties. The very foundation on which we may hope to build success lies in the interest and teamwork which we create among the hospital trustees."

STATEMENT OF SECRETARY GENERAL

Because of illness the Secretary General of the College, Dr. Franklin Martin, was not present at the conference. He sent, however, an introductory statement to the conference in which he recommended the appointment of the General Hospital Committee. His statement in part follows:

"There is nothing insurmountable, in my judgment, in the standardization of the

hospitals of this continent. It is a matter of organization; of organization that attacks with courageous force the roots of the problem and not its branches and twigs.

"The fundamental elements of this work are: first, the patient; second, the doctor who treats the patient; third, equipment and intelligent administration; fourth, adequate nursing facilities; fifth, diagnostic laboratories in charge of a practical laboratory man. These five fundamentals form the basis of the concrete structure which we are to approach.

"Assembled here today are members of our State and National Committees. We have with us also leading hospital superintendents. You are men of force, of intelligence, and of executive ability; you are quite capable of formulating a plan of minimum efficiency that may be applied to each class of hospitals. This is one of the tasks for which the Committees of the College were elected, and not only *one* of the tasks, but the *paramount* one. With our Director and by ourselves now this plan is to be developed. At the end of one year at least one thousand hospitals should be published in their definite groups as Class "A" hospitals according to the standards of the American College of Surgeons. We have no compulsory power over hospitals that do not enter into the program with us. But we have with us the strong support of some 4,000 Fellows and the force of public opinion because what we want is right.

"Let me say that the standardization of hospitals covering a continent can be accomplished only by firmness and by the untiring exercise of the courage of our convictions. Let me urge also that swiftness of action inspires confidence and defeats opposition."

DISCUSSION OF PAPERS

Much valuable help was gained by the discussion of papers which occurred at the Conference. The greater part of these discussions is given in the following pages. During the last two sessions of the Conference, however, a considerable part of the discussion had to do with the ways and means of approaching the problem of standardization,

with the nature and scope of the questionnaire, and with the limits of the minimum standard. This discussion is here omitted, although many valuable suggestions were gained from it and utilized by the General Hospital Committee. Among those who took part in the discussion and whose words are not here reported are: Dr. Walter H. Conley, Department of Public Charities, New York City; Dr. Edward S. Van Duyn, Syracuse; Dr. Harold C. Goodwin, Albany; Dr. F. F.

Lawrence, Columbus; Dr. George N. Kreider, Springfield, Illinois; Dr. J. Wesley Boveé, Washington; Dr. L. W. Littig, Davenport, Iowa; Dr. Ernest A. Codman, Boston; Dr. Charles E. Bowers, Wichita; Dr. George B. Kunkel, Harrisburg; Dr. Alexander MacAlister, Camden; Dr. Richard W. Corwin, Pueblo; Dr. Joseph C. Bloodgood, Baltimore; Mr. Asa S. Bacon, Chicago; Mr. Fred S. Bunn, Youngstown, Ohio; and Dr. Charles N. Dowd, New York.

I. HOSPITALS AS THEY ARE THE HOSPITAL PROBLEM OF TODAY—WHAT IS IT?

By JOHN A. HORNSBY, M.D., CHICAGO
Editor, The Modern Hospital

THREE are in the United States 6,877 hospitals and sanatoriums, and 1,780 allied institutions, maintaining a total of 670,872 beds for the care of the sick. Of these beds, 645,639 are in hospitals and sanatoriums, general and special, while 25,233 are in the allied institutions comprising homes for the aged, orphanages, rescue homes, penal institutions, and homes for the deaf and blind. Of this total number of hospital beds, at least 600,000 are occupied every day in the year. With the data in detail, as to the ratio of hospital beds to the incidence of population by states, I will not tax your patience at this time. Suffice it to suggest here, that the proportion of hospital beds to the whole population varies widely for different parts of the country. For instance, in New York City, there is one hospital bed to every 130 inhabitants; in Ohio, taking the state as a whole, there is one hospital bed to every 250 inhabitants, while in the state of Texas, the proportion is as one to 450. The explanation of this is almost obvious: New York City is a great center of tenement houses, with many poor and dependent; Ohio is a state of many cities and towns but with also a large rural population that is measurably independent of institutional care; while Texas is not only a state of widely spread population, but is made up of

people of pioneer character and experience, of less poverty and intensely independent and capable of self care and mutual helpfulness.

Figuring a total architectural and equipment cost at the rate of \$1,500 per bed, which is under rather than over the actual figures, we have a total amount of money invested in hospital buildings and equipment in this country of \$1,313,815.50. It is fair to assume land values for hospital property at 10 per cent of the cost of buildings, making a total investment in land and buildings of \$1,445,197.50.

The per capita cost per day for the maintenance of a patient in the hospitals of this country ranges all the way from \$1.25 up to \$7.00. By far the larger number of beds are those in public or charity hospitals, and the per capita cost in these is lower than in any other hospitals. Hence it is fair to assume an average per capita cost per day of \$1.50, making a total expenditure for the country for each day in the year amounting to \$1,313,815.50, or a total annual expenditure for maintenance alone aggregating \$479,542,657.50. Approximately 250,000 beds, however, are not occupied each day; the overhead cost of administration is the same whether the hospital be full or not, but the items of raw food, dressings and other hospital materials average approximately 50 cents per person,

or, for the beds unoccupied for each day, \$125,000, or a total of \$45,625,000 which must be deducted from the total cost of maintenance, leaving a net total for annual expenditures for hospital maintenance amounting to \$433,917,657.50. It is believed that hospital architectural expansion, new buildings, and new wings amount to at least 10 per cent of the amount invested, or a total of \$144,519,705.00, making an annual cost to this country for hospital purposes, including maintenance and new construction, of a grand total amounting to \$578,437,362.50.

These stupendous figures give a pretty definite if incomplete idea of what we call the hospital problem; not included in these figures are public health work of all kinds, dispensaries and out-patient service, social service, bills for medical and other professional fees.

Before we go into a discussion of hospital service to the sick in an attempt to see just what we are doing, let us now consider for just a moment what the future holds in prospect as the additional hospital problem: Within the past three years, two sickness surveys have been made—one under the auspices of the Thomas Thompson Trust, of Boston, and the other in Birmingham, England, one of the most completely hospitalized cities in the United Kingdom. The American survey took in four counties in the state of New York, in which urban, suburban, and rural population averaged that of the country as a whole. All the analyses were carefully and completely made, and at the end it was discovered that about 11 per cent of the people who were sick enough to be under a doctor's care were attended in the hospitals of the area and about 89 per cent were attended at their own homes. In the Birmingham survey, it was ascertained that 12 per cent of the population were sick in the hospitals and 88 per cent were sick in their homes.

In the light of pathological, bacteriological, and X-ray aids to diagnosis and the advances in all branches of science that have been made in recent years, complete reliance on bedside diagnosis is no longer the rule, and in perhaps more than 75 per cent

of all cases that reach the hospital, laboratory work of some sort is required as an aid to correct diagnosis, and, in perhaps 50 per cent of all the cases that reach the hospital, treatment includes vaccines and serums, or the X-ray, or scientific special feeding. These aids to diagnosis and treatment, under properly trained directors, are assembled only in the hospital; they are not available in the home of the patient.

If this statement of the case is true, then approximately 90 per cent of the people in such an enlightened country as this and in England are deprived of the best service during sickness that modern medical science has to offer.

Nearly every hospital epoch, since hospital history began, has been coincident with a war. We are now in the midst of the greatest war that the world has ever known. Hospital progress, in the past decade, has been more rapid than ever before. Then is it too much to predict that just now we are at the threshold of a new hospital era, one that contemplates an almost if not quite complete hospitalization of the sick? If this is true, then the next few years are to witness a marvelous growth in the number of people who seek the hospital when they are sick, and almost without question the next decade must see an increase in the number of hospital beds in this country, at least four or five times the number we have now. A sudden increase in the demand, up to the maximum which we may expect, is not possible, because there must be an educational period among the public to create a realization of what the modern hospital actually is and the necessity for its use if the sick are to have all the benefits of modern medical discoveries and methods.

So much for the present hospital problem and so much in the way of prophecy for the future. But it is a fundamental principle in any modern business that success depends in large measure not only on a realization of the assets in the business, but also on the value and extent of the product turned out—in other words, the work that is done. The product of the hospital is health. It is not computable, except indirectly, in dollars

and cents, although health is a money asset, demonstrable in that healthy communities are prosperous and unhealthy communities are poverty-stricken, lack initiative and enterprise, and eventually retrograde rather than progress. Indeed we now have health insurance, which comes very near to fixing a real money value on the health versus the sickness of the individual.

We have already seen what the value of our hospital plant is, over \$1,400,000,000, and we have seen that nearly \$500,000,000 is expended annually on the maintenance of the plant, an amount that at 5 per cent interest would entail an invested or earning capital of \$10,000,000,000. We must now proceed to determine the work that is actually being done. Fortunately, the more important phases of the modern hospital problem, under Mr. Bowman's wise arrangement, are left to abler essayists, our discussion being divided into three parts, viz., (1) the hospital problem as it is and the work the modern hospital is doing for the sick; (2) what medical science demands of the hospital that it is not now doing; and (3) how these results are to be achieved.

SCIENTIFIC WORK IN THE MODERN HOSPITAL AS IT IS CONSTITUTED TODAY

A few of the leaders in the hospital world have realized for a long time that definite, tangible progress could come in that field only when there were data at hand, and the necessary machinery that would furnish comparisons as between individual institutions. The difficulty has been to reach a common starting point. We have some pretty definite figures, as we have seen at the outset of this discussion, concerning the character and value of our plant, but we are not very much concerned with that item in considering hospital progress, excepting in so far as the character of the plant lends itself to the output of work, but we are very deeply concerned with methods by which the work itself may be computed. There is no good reason why the hospital business should not be considered alongside all other industries in the modern world, and it seems to us that the hospital field is the only industrial field

that has no bases of comparison that are of reliable value.

COST OF ADMINISTRATION

For instance, there is no accepted formula by which the cost of hospital maintenance can be ascertained for purposes of comparison. Some institutions figure interest on the value of their plant and money expended for new architecture and elaborate alterations, while other hospitals figure in the per capita cost of administration only the actual outlay for monthly maintenance, ignoring the items of interest on investments, insurance, taxes, expenditures for the training school, and funds expended for alterations. In the one case we will have an extremely high per capita cost of maintenance, and in the other a figure so low as to be entirely unjustified by the actual facts.

Then again, one hospital is merely a boarding house for the sick, without scientific departments of any kind and without trained people, while another hospital gives a real scientific service to the sick and has in its equipment all the accessories to diagnosis and treatment, and the benefits of trained direction over these scientific departments. And yet the state of the education of the public is so embryonic that trustees and the supporting public, and even medical staff members, often fail to differentiate between these two institutions and settle the matter in their own minds as to the better of the two on a basis of the cold figures in terms of dollars and cents. This is one serious reason, if not the most important, why hospital progress is so slow.

SCIENTIFIC SERVICE IN PRESENT-DAY HOSPITALS

Abler men on this program will tell us what modern medicine has a right to expect in the way of scientific service; it is our part to try to evaluate, if we can, the service that is today available in the many classes of hospitals to which the sick have access.

At the outset, let us suggest that no thumb rule can be established for all classes of hospitals, under one heading. For instance, we have not a right to expect the same elab-

orateness in service in a small, unpretentious hospital in a community not over-rich, whose ideals are not high, and even whose medical men lack the training and skill and experience of those in larger and broader communities that afford competent material and the essentials to training from which medical men acquire experience and skill. The men in small isolated communities demand far less — indeed, would not know how to employ elaborate and technical machinery, whether it be in architecture and equipment or in methods. But we have often said, and repeat now, that no hospital can be better than its medical staff, and no medical staff has a right to expect evaluation of its abilities higher than the *prima facie* evidence at hand in the equipment and in the methods employed in the workshop in which their work is done. All of us know institutions, elaborate in architecture, great in size and rich in endowment, that are mere boarding houses for the sick, and it will be found in these institutions that the medical staff is mediocre, without ambition, energy, or enterprise. We all likewise know small isolated institutions, far out in the country, small in size, poor in worldly goods and almost without equipment or funds with which equipment may be bought, whose service to the sick is of a high scientific order and in which the sick man, woman, or child may have at his need the best that modern medicine offers. This is the hospital whose medical men go away for study and bring back home with them methods of practice, of diagnosis, of treatment that place their institution far up in the van of the time. So that we may be pardoned for insisting that, as the medical staff of a hospital is, so that hospital will be, and we challenge the medical profession in this country and hold its members responsible for forwardness or backwardness in the character of the institution in which they severally work. This does not mean that the medical staff member must assume or obligate himself to assume any of the functions of the administrator. It is the duty and the privilege, to our way of thinking, for the physician to demand what he needs for the care and cure and comfort of his patients,

and it is the duty of the administrator to furnish these. It has been said that hospital administration costs money and that the large, rich institution can do things that the small and poor institution cannot do. This is true, but only to a limited extent. The architecture and equipment of a hospital are important items; the work that is done in the institution is the vital thing.

RECORD-KEEPING

The patient in the hospital starts with his record, or the reverse is true — the record starts with the admission of the patient. If good records are kept it is almost certain that good work will be done. In perhaps 75 per cent of the hospitals in this country, large and small, general and special, the record as it is kept today is practically valueless. It is necessary to statistics and to the financial needs of the institution to record the patient's name, his address, his social state, the name of his responsible friend, and the location to which he is assigned in the institution. But in 75 per cent of the hospitals there is no examination whatever on the admission of the patient, and his assignment to a location in the institution is based upon his own statement as to what he is suffering from. No admitting diagnosis is recorded, and in a vast majority of cases no history of the patient's disease is written. This haphazard method of admitting patients is responsible for very many hospital epidemics of communicable disease. A child whose mother says he has a bad cold is placed in a ward with twenty other children. Three days later he has, unmistakably, scarlet fever and the whole ward is infected.

But the failure to make a record and admitting diagnosis is only the beginning of carelessness and inefficiency. In 75 per cent of the hospitals the records do not show a diagnosis even after examination, and up to the moment that the patient goes to the operating room for surgical procedure; and in many hospitals this lack is premeditated and is actually intended to cover up and hide carelessness or incapacity on the part of the surgeon to diagnose the disease for which he is

about to subject his patient to a serious major surgical operation. In other words, in many of the hospitals of this country the scientific auxiliaries to diagnosis are not employed and medical treatment and surgical interference are undertaken after the most cursory bedside examination. That was the necessary practice of fifty years ago because there were no scientific adjuncts to diagnosis, the laboratory and the X-ray. No intelligent community will tolerate it today after being enlightened, and yet it is the practice.

We find that the only part of the medical record of patients in a vast majority of the hospitals of this country is the nursing chart, and that merely records the temperature, pulse, respiration, and medication. It is rare indeed that we find a running, continuous medical story of the progress of the case written from day to day in the record.

There are spasmodic attempts in this class of hospitals to make and record urinalyses in special cases, and we find the occasional record of other laboratory examinations, but it is not routine practice. Who is responsible for this? I submit this question to you, gentlemen of the medical profession.

In perhaps 25 per cent of the hospitals there is a serious attempt to keep a good medical record, and in about 10 per cent of all the hospitals the attempt is painstaking and constantly employed and in keeping with the demands of modern medicine. In these hospitals whether the patient be a service case and a free patient, or a private patient sent in by his physician, there is an examination as a part of the admission routine and at least a serviceable diagnosis recorded. It is the routine practice in these hospitals to begin, through the service intern, scientific work on the patient the moment he is in bed. First a history of the case is taken and recorded by the intern, and this history brings to light, even in the mind of an inexperienced intern, the probable diagnosis. Then the serious work is begun. A urinalysis, single or a twenty-four hour specimen, is started. A blood count is made and blood pressure taken if there are indications that this is a factor in the case. A sample of the blood is taken for complete exam-

ination; a test meal is given for chemical examination of the stomach contents, if the history points in this direction, and, if the story has pointed to the probable importance of the state of the intestinal tract, a sample of the stool is taken for microscopic and perhaps chemical examination. If the story points to the likelihood that the X-ray, either in fluoroscope or plate, may be of value, that work is done. Meanwhile the patient is in bed and fed sparingly.

Presently the visiting medical man, the patient's physician, sees him and there are presented to him on the chart data that in a very large percentage of the cases will give him his diagnosis.

Some two or three years ago a survey was made of the autopsy records in Bellevue Hospital, New York, and the statement was published, as a result, that in 58 per cent of the cases that went to autopsy the diagnosis was wrong. These figures were so startling that we took the liberty of making some inquiry concerning the method employed to obtain them, because if less than one-half of the cases that went to autopsy in an institution like Bellevue Hospital, with the splendidly equipped medical men in practice there, were correctly diagnosed, what was to be assumed as to the state of things in less fortunate institutions?

We found that these figures were taken from approximately 300 selected cases, that very many patients arrived at the hospital comatose and moribund, and that some of them died almost immediately upon arrival. So that we may be forgiven for challenging any set of figures built in this way and for saying a word of defense for the American medical profession, whose ability, we believe, is not represented in any such state of affairs, and we believe we are safe in saying that in the seriously minded hospitals of this country, whose medical men are of average ability and who are enterprising and industrious, diagnosis is humanly possible with the help of present-day mechanical agencies in a very large percentage of cases, and we believe that diagnosis at the end of the knife is unnecessary except in many of the cases where it is now resorted to.

Let us not be understood as insisting that a hospital, in order to be accorded the right to exist and to care for the sick of its community, must perform the intricate and higher technical things in diagnosis. We believe that a hospital in a small community, that must make an unpretentious beginning, will be excused and justified if it does merely the best its facilities and equipment and the skill of its medical men will allow. But in such a hospital the unforgivable thing, to our way of thinking, is dishonesty in the work it does. This is not an indictment of the physician; it is a warning that medical men are being made the victims of this species of dishonesty and that they and their patients are the sufferers. The medical men in such a hospital will be abundantly justified if they must rely on bedside diagnosis only — the eye, the ear, and the touch — but the hospital itself will never be justified in assuming to perform service that it is incapable of doing accurately and with assurance to its medical men that the service performed is honest. There are many methods that may be employed by these small hospitals for doing much of the work that they are not now doing. The joint employment of trained directors for part-time service can, in a vast majority of cases, be substituted for all-time salaried, trained people, and it will be far better for such a hospital to employ for its laboratory work a properly trained man who can give it only one day in the week, or one hour in the day; whereas the hospital will never be justified in offering to its medical men the services of an incapable and inexperienced pathologist, even when such person might be available for all of his time.

It will nearly always be possible for these small hospitals to have a competent pathologist for half a day in each week, even though he may live fifty miles away at some larger center, and a great majority of hospital patients can better afford to wait for such accurate examination and diagnosis than to depend upon the guesswork of a less competent pathologist.

And so with the X-ray work of the institution. Almost any hospital employe, an intern, the pharmacist, the head of the train-

ing school, even an intelligent pupil nurse, may be taught, in a short time, to take pictures of the long bones in cases of fracture, and pictures of metallic foreign bodies. Most other cases will wait until the consulting radiologist is due to spend a day or half a day in the institution; but the hospital will never be justified in substituting for a trained operator and a trained interpreter someone whose pictures are badly done and who is utterly incapable of interpretation. And yet that is exactly what many hospitals in this country are doing today, using inefficient, untrained X-ray operators who are utterly incapable of interpreting the plates they take or the fluoroscopic picture they may see. Even the best surgeons in this country, men who are internationally known as diagnosticians and operators and who have had large experience in the observation of results of X-ray work, decline to interpret for themselves and rely for interpretation upon the trained and capable roentgenologist.

MODERN DIETETICS

Less than a month ago, I visited a large modern hospital in an important central western city, a hospital of 400 beds employing a high-salaried administrator and associates. I found installed there as dietitian a trained woman who was being paid a large salary, as such salaries go. She had been there for a year; she had come from the position of dietitian in one of the foremost hospitals in this country whose medical men are known around the world for their ability and progressiveness in internal medicine. This woman had been thoroughly trained to support the physicians and to feed their patients specially in diseases of metabolism. In other words, she was thoroughly equipped for the work for which she had been employed. I asked her what she was doing. She said she was making up the trays for the private patients.

"Yes, but I mean what scientific work are you doing with your doctors?" I asked her.

"Nothing," she replied.

"Why?"

"Doctor, I have been here a year," she replied with suppressed feeling that I had

not expected, "and I have not been asked by a single physician in the hospital to feed a patient specially, nor have the doctors, any one of them, taken the slightest interest in anything that I might be able to do."

She added, however, that on her own initiative she was at that moment engaged in the special feeding of a diabetic patient in the free ward; but, unfortunately, she said, she had no urinalysis and no blood picture, and the patient was not being weighed.

I happened to know that the superintendent was a medical man of high ideals who had brought that woman into his hospital for the purpose of giving to the patients, through their doctors, real scientific service. I had occasion, later in the day, to announce to a large contingent of the medical profession of the city that their hospital was decades ahead of them — and that was the case.

I am repeatedly in receipt of letters from dietitians throughout the country, women of high education, of elaborate special training, and of intelligence and ability, who complain that they are given no work to do in the special feeding of cases in their institutions, and that their energies are confined, through no fault of their own, to "making up the trays for the private patients."

I think that perhaps twenty hospitals in this country, ranging in the number of medical men taking part, in each instance from one to five doctors, are actually employing the services of a trained dietitian in a scientific way in the special feeding of selected cases. Four years ago, I made the statement that there were perhaps half a dozen capable dietitians in the United States. My statement was refuted from many quarters. I now make the statement that there are twenty capable trained dietitians in the United States who have the ability and necessary training to support the scientific internist in the feeding of special cases in diseases of metabolism. I make the prediction that in two years from now there can be more than one thousand trained, competent dietitians in the hospitals of this country, provided the medical staff members specializing in internal medicine will utilize them and help to perfect their training.

Nearly all hospitals have the old formulæ of "special diets." We know, however, that most of these special diets are valueless, and that, in the light of studies in metabolism and in the physiology of digestion, they are based upon wrong principles and exploded theories. And yet we find these special diet charts in the serving rooms of nearly all hospitals, and in most of these they are exalted into actual fetishes.

SOCIAL SERVICE AND FOLLOW-UP WORK

It has been the complaint throughout this country for almost a decade that the hospital is a place for the millionaire and for the pauper, but that 90 per cent of the population, people in moderate circumstances who would refuse charity and cannot afford the luxuries of the modern hospital, have been without consideration. Those of us who have been closely in touch with modern hospital practice know that this indictment has been largely true. There seems now to be dawning a time when it will be no longer true. In the first place, it seems to me that private patients in moderate circumstances have been educated to the point where they no longer demand the luxuries of private rooms and special nursing and special menus, and that they are coming to be more and more content, as time goes on, to go into the small two-bed and four-bed wards of the hospitals and realize the value of undergraduate pupil nursing. It seems also that this class of patients is coming to realize that the hospital is not a hotel with the special function to administer to dainty luxurious appetites for rich and costly foods, but that the plain and simple things agree best with sickness and agree best with most patients. It seems to us that these are the first steps in any serious attempt to give a greater consideration to the vast middle class of people in this country.

And we have now gone a step farther and are making some serious attempts at least in a few communities to care for the outpatient who would reject charity and who cannot afford the luxuries of visits to the private offices of physicians. The day clinics in New York City are an example; the newly formed Scripps Foundation, of San Diego,

California, is such a clinic. A few isolated hospitals here and there are attempting precisely the same thing, through well-organized groups of medical men who co-ordinate their efforts in special branches of medicine and who co-operate in the diagnosis and treatment of cases for a lumped fee. The trend in this direction is going even a step farther, and in a number of isolated places medical staffs of hospitals have been put on salaried, full-time service, and their special abilities and energies are being co-ordinated in the diagnosis and treatment of patients — for one fee which the hospital adds to its charges. The necessity for this service is in response to a definite public demand, a demand coupled with the complaint that medicine has become highly specialized and that a patient who needs the services of several specialists in the diagnosis and treatment of the disease is unable to pay consultation fees to several men in several branches of medicine. However much we may assume that this trend is likely to interfere with the earnings of members of the profession we may just as well make up our minds that exactly that contingency is facing the profession today. I am not undertaking a solution of that problem. I am merely warning that the problem is here and it is only another expression of that far greater and more serious problem facing the American profession, state medicine.

One of the very greatest deficiencies in our hospital records, and consequently one of the most important items of hospital and health statistics, is the almost total absence of follow-up work. I happen to know one institution, exclusively surgical in character, that spends large sums of money and employs a corps of trained people to follow up to their homes, over long periods of time, every patient operated on. Only recently it fell to my lot to look over some of these records, and I was astounded to find that eager, anxious, ambitious women, with the

stimulus of an insistent demand from the surgeons, had been unable to follow a large percentage of their cases more than two or three years. And yet we know that surgery is successful only as a permanent cure or as a definite, pre-announced period of relief. Many patients get well, apparently, and go back to their homes greatly relieved following a surgical operation, only to have the disease recur after a brief interval of relief. Many thousands of these cases are reported by members of the surgical profession as cures, when, as a matter of fact, a correct diagnosis had not been made even on the operating table and no relief whatever had been afforded; the only thing that had been accomplished was that the patient had been subjected to the pain, distress, and hazard of a major surgical operation that had dwarfed to the point of exclusion the original trouble from which he had suffered.

If this means anything, it means that measures must be taken by the hospitals of this country to follow patients back to their homes and to a period of complete cure — or to recurrence — before the record of the patient can be completed and reported for the purposes of literature.

It would be far pleasanter to me to have penned and read to you a eulogy of American medicine — to have painted for your edification an apotheosis of the American profession — but the task that was assigned to me claimed out of my somewhat varied experience a story of actual achievement. It is a plain, unvarnished tale of modest accomplishment as I have told it. It has pictured the god of science walking with feet of clay, but if the pathway shall lead to the higher heights, into realms that now seem to invite and permit the entrance and habitation of only the superman, we may feel abundantly rewarded for the exceedingly small part that we have had in pointing the way.

THE HOSPITAL AND ITS COMMUNITY

BY EDWARD MARTIN, M.D., F.A.C.S., PHILADELPHIA

John Rhea Barton Professor of Surgery, University of Pennsylvania School of Medicine; Surgeon, Hospital of the University of Pennsylvania

I HAVE listened with interest to Dr. Hornsby's paper, and I give assent to all that he has said in his admirable summary of the hospital situation. But it seems wise and proper to gild that black frame a little. There are some good things to be said for the modern hospital. It has advanced more rapidly in the last ten years because medical efficiency has advanced more rapidly during those years.

Hospitals were founded on broad charity: communal hospitals, city hospitals, and state hospitals. Then came the altruistic hospital founded by men who strove to make life less miserable for others by giving freely their efforts and dollars.

Then came the scientific teaching type of hospital. Medical schools found this type of hospital vital to right teaching. It is almost within the memory of men here when the courses of instruction in medical schools consisted of six months', or even of three months' work, the student in the other months of the year working in a drug store or in a blacksmith shop. But that day is gone. The medical schools now require service in an educational hospital. Then came the next higher type, the purely scientific research hospital which is a splendid institution, though sometimes it may forget that the hospital is for the sick man. These hospitals are for the scientific advancement of the profession.

Then, finally, came the private hospital driven by a powerful motor like Codman. But, sometimes, under a different sort of leader such a hospital is a curse, for it may be purely commercial; it may evade charity and altruism and aim at getting dollars and cents.

Now, when a man graduates from a medical school he is only 20 per cent efficient to his community. But when, in addition, he is trained in a good hospital he is competent. If he marries a nurse, so much the better. A teaching hospital means to the community 80 per cent efficiency of such a man.

I see a good many young men who go from medical schools to hospitals for further training. I write letters to some of them and ask them about their work. Some write me that they are doing well; that they are having a splendid experience in the hospitals which they could not elsewhere secure. But some write that the facilities and equipment of the institutions with which they are connected are poor and inadequate; that there is no one in particular who cares how the hospital is conducted; and that the staff is behind the times. Such a condition suggests work to do.

In Pennsylvania we have a man named Baldy. Some of you know him. I have not been able to trace his family correctly, but there is an old Greek story of a dragon which shows its teeth. Baldy is a dragon. He is a fighter. He would rather fight than eat. He is honest, truthful, fearless, and a man of broad ideas and ideals. He received the appointment as President of the Bureau of Medical Education and Licensure and promptly started in to establish hospital standards. In Pennsylvania we do not allow a man to practice medicine until he has completed one year's internship in a hospital. I hope that such a requirement will soon exist in every state in the Union. Why do we want men 20 per cent fit when we can have them 100 per cent fit? Now Dr. Baldy's idea is that the function of a state board is to protect a community by requiring sound training of its medical practitioners. And with this idea in mind he inspected every hospital in the state of Pennsylvania. He studied the question of a minimum standard of efficiency as it relates to equipment, the staff, the number of patients, etc. No man receives a license in Pennsylvania to practice medicine unless he has had a year's training in a hospital approved by the state board. Dr. Baldy laid down a standard for the hospitals in the state to live up to. The various boards of managers thought at first that he was a little too exacting and dictatorial. But in one week he

accomplished what hospital staffs had been trying to do for five years. He got the standard for which he so earnestly pleaded. The hospitals got specialists on the staff, X-ray men, and laboratory men.

Dr. Baldy's weapon to force hospitals in line was this: Unless hospitals met the definite standard which he recommended, they could not get resident physicians. And, further, do you suppose there is a single hospital in this land that is willing to be classed as Class B or Class C when there is a Class A? If they are unwilling to come up to Class A, they will become extinct. Class R hospitals (R stands for "rotten") will promptly vanish. Publicity is a great power.

In the matter of standardization, what is the very foundation on which a hospital rests? We are here, today, not to tell what we know. We are here to do something, to act. Let us take up the first point. You know of the great shop of Mr. Henry Ford. Does it run itself? No. A lot of men got together and studied every phase of work in this great establishment. Over every department is an executive head. They are well trained men — men who do things. Now then, for the betterment of our hospitals we should have, in the first place, trained superintendents. Can they be secured? Where are they? You can count on the fingers of two hands what we may call expert superintendents in this country. I shall not name them. There are some here today, but we all know them. Where did they get their training? They snatched it from the heart. They were born to it. They created their opportunities. If we expect to have a sufficient number of men of power, of great executive ability to take charge of our hospitals, we must provide some school or method of training. What is to be done, and what is the first step? The first step is to establish some school for the training of hospital executives. Fundamentally, that will be a medical education plus a hospital residenceship, and after that intensive training in hospital management. The time is ripe for it.

If you have a real, wide-awake, up-to-date superintendent, he should conduct things, and not the board of managers. The function

of the latter should be to get money and to guide and approve what the superintendent does. A real superintendent will not only help the people, his friends, and his colleagues, but he will help the physicians and surgeons on the staff. He will be their executive; he will make the things come true which the doctors want. First, then, you need executives; second, you need a training school to create executives.

Now another matter, which is the embodiment of Codman's great dream, the keeping of complete case-records. Unless a hospital keeps accurate records of cases, it cannot tell what its results are. The record should show the progress of the case from its admission to the hospital until a cure is effected or until death ensues. That is Codman's dream. If a case is surgical, there should be a record of all examinations, when they were made, what operation was done, and the result. The record should show the pre-operative diagnosis. Nothing is more lowering to a surgeon's pride than that, but it helps in conservatism. There should be a record of the diagnosis and of post-operative findings, and then, the most important of all, a record of the wound healing. There is probably not one of you here who has not had a wound break open in the last two years, yet you may not recall how the case was dressed. If you had that record before you it would be of material advantage. You may have operated on 500 abdominal cases and not have a wound break open, but it may occur to any of us at any time and it is well to have a record of what was done. Every failure of complete wound healing should go on the record. An intelligent board of managers should see to it that there is a complete record of every case from the standpoint of the main function of a hospital. We will say, for instance, that Jones has operated on 100 hernias. Now, if Jones is an affable, original person, on good terms with everyone, he may go on doing rotten surgery until he is found out. If in 100 cases of hernia, he has 37 per cent relapses, or 87 per cent suppurations, no board of managers would tolerate his work, especially if the hospital adopts this method and honestly reports comparisons between hospital and hospital.

HOSPITAL STANDARDIZATION

To recapitulate: The first need is a trained superintendent. The second need is a com-

plete set of records showing what a hospital is doing and the final results of treatment.

DISCUSSION

DR. JAMES E. MOORE, Minneapolis: I have listened with great interest to the paper of Dr. Hornsby and the remarks of Dr. Martin and have gained some new ideas. The topic before us, I understand, is hospitals as they are. God knows they are bad enough; yet I am an optimist and can tell you in a few words how much better they are now than they used to be, say 35 years ago. At that time, I had some experience in the country districts of Pennsylvania and before I came to the city of Minneapolis I was a country practitioner of six years' experience. I had little or no hospital experience then, or no more than I had picked up as a post-graduate student in New York City and in Philadelphia. The hospitals in Minneapolis at that time were only so by courtesy. They were very inferior boarding houses for sick people. Now we have 2,200 beds in Minneapolis hospitals, good, bad, and indifferent. But the progress of 35 years, as I look back, makes an optimist of me.

I have heard a great deal from time to time of pessimism connected with the standardization of hospitals. I have heard men say it cannot be done. They say we are infringing upon the rights of private individuals; that we cannot manage the board of directors, and that every doctor is working for his own good or advantage rather than for the good of the hospital or for the good of his patients. I am an optimist about that too. Medical men have been standardized. We have established schools in Minneapolis and elsewhere for the education of surgeons. We must have more of these schools, and I sincerely hope this institution for the education of superintendents of hospitals suggested by Dr. Martin will be brought about, because if there is anything we need it is a good superintendent. A good superintendent is the life of the hospital.

Medical colleges, as you all know, have been standardized. Can you imagine any more hopeless undertaking than we had before us not more than a decade ago when we undertook to standardize medical colleges? Now it is an accepted thing. Gentlemen, I am always an optimist, but, it seems to me self-evident that, now we are taking hold of this, we shall accomplish our aims.

DR. EDWARD P. DAVIS, Philadelphia: The State of Pennsylvania has done not only a service to the profession of medicine, as outlined by

Dr. Martin, but one of the steps taken by the Board of Licensure of the State of Pennsylvania has been taken with a far-reaching purpose for the welfare of these United States. It is to be hoped that the war now upon us will end before long largely through our instrumentality, but there will follow a conflict no less vital for the peace of the world and for the physicians of the United States. At this moment we hold the balance of power. Can we hold it in the future, and if so, what will it depend upon? It will depend upon a sound, vigorous, and healthy population. It will depend upon a natural increase in population, upon the baby, upon the mother. When the state of Pennsylvania took up hospital standardization, it insisted upon a most important proviso, namely, that every hospital should maintain a maternity service; that every resident going to a hospital should receive a maternity training, and that no community having in its midst a hospital should be deprived of the facilities of modern, scientific obstetric practice. As an obstetrician this action naturally appealed to me, and I urge upon you, not simply in the interest of the profession, but in the interest of our whole people, in the interest of our country, to follow Pennsylvania in this regard.

DR. EDWARD JACKSON, Denver: I presume, Mr. Chairman, it would be in order to discuss what is relevant to the general title. It has been impossible for the readers of these papers to touch all of the points that, it seems to me, should be discussed under hospitals as they are. The first one of these is the very large number of small hospitals that now exist among the 8,000 hospitals Dr. Hornsby spoke of. A large proportion of them are relatively small. The proportion of small hospitals is increasing very rapidly, as all of us know who have observed the course of events in the smaller cities and towns. Any movement for the standardization of hospitals must take that into account. If we have a training school for hospital superintendents, that school in five years, in ten years, or a longer period, will furnish superintendents to hospitals that can pay for a full-time competent superintendent. But the establishment of such a school and the announcement of its curriculum will soon create a demand for well trained superintendents among all hospitals which all hospital

trustees who conscientiously do their duty must heed.

One other point that perhaps ought to be taken up: I have seen the evils of many hospitals. In one-half, one-third, or one-tenth of the organized hospitals that constitute a large majority of the 8,000 hospitals, a very common fault is a large irresponsible staff that is in no way organized. The members of the staff do not really know who is on the staff and who is not. The staffs have spread out by the most imperceptible gradation to allow any licensed physician in the community to bring patients into the hospital and to use the operating room in order to *learn* surgery. It seems to me that many of these things will be best met by some general plan of hospital organization which will include the training of the superintendent, which will indicate the size of the staff necessary for a certain number of beds, and which will include definite requirements for case-records.

DR. ANDREW S. LOBINGER, Los Angeles: Dr. Jackson has touched on a point which is a great problem with us on the Pacific Coast, especially in Los Angeles. What shall we do with those hospitals that positively decline to have staffs? We have six large hospitals in Los Angeles, outside of the County Hospital, not one of which has a well considered organization of a staff. It seems to me, if we take the optimistic view which Dr. Moore has suggested, we must consider some of our difficulties and defects. When the College investigates the conditions in various parts of America, it will find those as described in Philadelphia very different from those on the Pacific Coast. We are comparatively a new country on the Coast and things there are more or less in a chaotic condition. This has grown out of a feeling that hospitals are merely hotels for the care of the sick. That was touched upon in an able manner by Dr. Hornsby. One of the largest hospitals in our city has, for at least ten years, advertised that it was a hotel for the sick. But gradually these hospitals have installed X-ray laboratories, chemical and therapeutic laboratories; they have provided facilities for diagnoses. All of this is good. But we still have problems that will be difficult to set right. The hospitals in Los Angeles are, as I said, hotels for the sick. That statement is correct, and I know it will take time and education and earnest effort to lead those men who have money, energy, and influence away from that ideal. But the ideal is wrong; we know it is wrong.

DR. WILLIAM H. WILDER, Chicago: I wish to express my great appreciation of the valuable paper presented by Dr. Hornsby and of the remarks by Dr. Martin. It seems to me that the suggestion as made in both of these contributions to one phase of the subject should concern all medical men, especially those engaged in teaching and in the improvement of our medical standards. All of the states have not yet reached that desirable position occupied by the state of Pennsylvania, where the Board of Examiners requires, before licensing a medical student to practice medicine, that he shall have had one year of clinical or hospital medicine. But we are rapidly approaching such a condition. Our best medical schools now require a fifth year or clinical year before the degree of Doctor of Medicine is conferred. It seemed almost anomalous that we should require of students that they should serve one year in a hospital of standard requirements unless we define those standards and know in what hospitals they exist.

Some of our graduates go far east, and some far west, some remain here in Chicago. If we come to that stage in medical education that we require a fifth year in a hospital of every medical student, surely we must have definite information concerning the hospitals to which we send our students. It seems to me that those who are engaged in medical education should feel that this is one of the strongest arguments for the standardization of hospitals, and that we should heartily welcome it. When hospitals are standardized we can then, on a sound basis, refer our medical students to the hospitals for their fifth year. I am confident, then, too, that the hospitals will co-operate with the medical colleges and that they will help us in the education of our students to a greater extent than they have been able to do heretofore.

MR. DANIEL D. TEST, Philadelphia: When a man does not come up to the standard of Mr. Roosevelt, he may perhaps be an "undesirable citizen." Judged by these standards, I am an undesirable superintendent because I am a plain layman; nevertheless, I agree with Dr. Martin that the future superintendent of a hospital should be a medical man. But I have risen to speak because I feel I have a message to convey to the committee that is to consider the organization of a school for hospital superintendents. I believe in it. It is rather a new thought, but if you endeavor to train competent hospital superintendents by attending school alone, I think you are on the way to failure. A good

HOSPITAL STANDARDIZATION

deal of the stuff which makes a successful superintendent is born in him. I do not think you will find many men who, after four years in a training school for superintendents, will come out competent to serve as hospital superintendents. I do not know whether or not such a scheme is practical, but I do believe that a hospital superintendent is the most important factor with which we have to deal, not only from the standpoint of life and death, but also from the standpoint of the training of physicians and surgeons.

DR. PHILANDER A. HARRIS, Paterson, New Jersey: It appears to me that one item has been lost sight of in the discussion this morning. I am sure there is not present a Fellow of the American College of Surgeons who has not felt chagrined at times, who has not felt that he has had a personal grievance against the hospital where he works because of a disability, or of a needless death. He has felt the embarrassment which grew out of things beyond his power to control. For example, he has had reason to believe that a certain patient on whom he had operated would make a good recovery, and yet the patient died. All of you can recall such cases. But that very unfortunate experience has made it possible for us to see how we could prevent a recurrence of such incidents. We need more centralized control in our hospitals. That control should extend not only to the nurses, but it should reach to the resident, to his associates, to his clinical assistants. I believe that in the consideration of this matter what we want in a hospital is some simple plan of control whereby we may always fix definite responsibility. I believe that the only way in which we can bring about this control is by adopting a plan similar to that which is in effect in the Post-office Department, namely, every person who is in the Department has a manual before him and knows exactly what to do in any instance. If a letter is misdirected, the employe knows what to do with it. In hospitals we should have a similar scheme. There are too many things which are wrong. Orders for what we want done are not carried out and other things are carried out which were not ordered. What we need are specifications in the form of standing instructions to be followed in the care of all patients. Such a system of specifications should be built up as a part of this standardization project, growing out of the clear thought and wide experience of all of us.

DR. H. G. WETHERILL, Denver: Hospital standardization is by far the most important work undertaken by the American College of

Surgeons. The papers this morning must have impressed every one present that any attempt to standardize hospitals until certain other things which are antecedent to it are accomplished, would be quite impossible. The American College of Surgeons seems to have approached this subject in the proper sequence. The thing which is antecedent and absolutely necessary to hospital standardization is the standardization of surgeons themselves. Dr. Jackson has pointed out to us how impossible it will be to keep proper case-records, or to establish follow-up systems, until we have some control over those who are permitted to practice medicine and surgery in our institutions. In most of the cities of the West, any man who is a graduate of medicine may be admitted to practice in any of our hospitals and do as he pleases, whether capable or not.

As President of the Colorado State Medical Society in 1906, I made the suggestion that in every community it was desirable to form a community hospital board made up of representatives of the various hospitals, and that those who wished to enter upon practice in the hospitals in that city should make application to the board, stating in full their qualifications. The approval of the central board would then be a mark of merit and the doctor thus credited would be known as an approved practitioner in his specialty. Until some such measure is brought about none of these secondary things, like case-records, or follow-up systems, will be effective.

DR. ARTHUR DEAN BEVAN, Chicago: I have been very much interested in this whole problem for a number of years, and I want to congratulate the American College of Surgeons, first, and very emphatically, upon the splendid way in which this movement is evidently being started.

We devoted, in the American Medical Association, 15 or 18 years to just this problem as it relates to medical schools, and I want to say just a few words at the outset of this movement and attempt to show what I believe should be undertaken by this committee from the experience we obtained in our attempt to inspect and standardize the medical schools of the country and elevate their standards. It is a splendid thing to get a fine body of men interested in this problem as you are today. It will not do, however, merely to have a meeting of this kind once a year, no matter how good your reports are, or how much enthusiasm you show. It requires something more if we are going to obtain results. That is the point I wish especially to speak on out of the experience we have had.

Year after year the American Medical Association used to have a Committee on Education bring in a very excellent report. On the whole, the men on that committee were splendid representatives of medical education, and the reports were excellent. But after these reports were read and published, nothing was done for another 365 days or until another committee brought in another report. The result was that from year to year little or nothing was accomplished.

To my mind, next to the work that has been done in medical education in this country this problem that confronts your committee today is the most important thing in American medicine. To produce results you have got to have an organization that will work every day of the 365 days in the year. That organization has got to be headed by one man. Any movement of this kind usually depends very largely upon having one man who is responsible for the success of the movement; some one whose heart and soul is in the movement.

The next thing to do is to get together the factors that are most interested in this problem and that can be of service to us in finding correct solutions. We should get as support in this movement the American Medical Association and co-operate with that Association. You must remember, that in a hospital we have not only surgeons and surgical specialists, but medical men and medical specialists, many of whom are not in close touch with the American College of Surgeons.

DR. EDWARD EVANS, LaCrosse, Wisconsin: I take it for granted that if such a permanent organization is to be formed it will be along the line mentioned this morning.

I want to crave your indulgence to present the viewpoint of a man who is working away from the medical centers and yet maintaining certain ideals. It seems to me the question of hospital superintendents only reaches a small

part of this tremendous problem, because only a few hospitals have superintendents. We have heard for many years a good deal about surgical conscience. But the great problem today before the medical profession is to develop administrative conscience. That is not easy to do because few hospitals have the men or women with capacity, of real administrative conscience.

Years ago in a Chicago hospital, while a patient was being prepared for a Cæsarean section, the professor began to regale his clinic with a story about a doctor who brought in a case for Cæsarean section and who, when the intern told him that if he did not hurry the woman would deliver herself normally, told the intern to shut his mouth. In a little while, it happened, the house surgeon delivered the woman with forceps. Now, do you think the poor fool who attempted to do such work was as much to blame as the administration of the hospital? If that woman had been sacrificed, would not the administration of the hospital really be to blame?

What we need to do is to take hold now in a practical way and reach the hospital administration. In the hospital with which I am connected, means are taken through the administration to reach not only the moral, but also the economic aspect of the hospital procedure.

Dr. Moore has told us what splendid hospitals they have in Minneapolis. His hospital is splendidly equipped and up-to-date, but I remember going into a hospital half a mile from his, and on the board of attendants I saw the names of probably 200 doctors. On asking the superintendent about it, he replied, "Any doctor has a right to practice here who wishes to." I believe that is the case in most hospitals in the West. We must strive to meet the problem of the little hospital where every Tom, Dick, and Harry can do what he likes. Let every one of us see to it that men are competent before they are permitted to work in our hospitals.

II. WHAT THE PROFESSION OF MEDICINE WANTS IN HOSPITALS ORGANIZATION AND EFFICIENCY

By JOHN YOUNG BROWN, M.D., F.A.C.S., ST. LOUIS
Chief Surgeon, St. John's Hospital

THE title of this paper affords a very wide field for discussion. I shall limit my remarks, however, to a brief consideration of some of the recognized and fundamental defects incident to hospital

administration as found in some of the hospitals in nearly all communities served by members of the American College of Surgeons.

One of the chief aims of this College is the elevation and maintenance of surgical stan-

dards. We hope to see the day when no man will be able to hold himself out as a surgeon in any community without possessing the necessary ability, education, and training required to produce a surgeon and which he would and should require of any one about to operate upon himself or a member of his family.

To a certain extent, we strive to strengthen and purify our profession for reasons of pride and conscience. In addition to this, we all realize the fact that we are, together with those responsible for the conduct of hospitals, in the only true position to guide laymen in the selection of competent surgeons. We fully appreciate how helpless the majority of laymen are, even among the more intelligent classes, when it comes to the selection of one to render surgical service to them or their families in their hour of distress. The surgeon sees, quite frequently, examples of the lack of ability on the part of laymen to place a fair value on surgical competence. Hospital administrators are daily in touch with those who operate and are *in position and should be able to gauge surgical values among the various operators coming to their institutions.*

Hospitals are established for the purpose of rendering better service to the sick than they can obtain in their homes. The most successful hospital is the one which is conducted primarily from the ideal standpoint of the best professional service to its patients, and *not from the business standpoint of hospital economics and financial deficit or surplus.*

It is impossible for those in charge of hospitals to evade the responsibility conferred through the trusting confidence of the patient who enters their portals in the full belief that nothing improper or unwarranted will be permitted by the hospital authorities during his or her stay within its walls. Were it not for this almost universal feeling on the part of the patient, it is doubtful if our hospitals could exist. Do the hospitals in return meet the confidence of the patient with a full realization of their responsibilities in every direction? Unfortunately, in most cases, we must reply in the negative.

Many hospital superintendents realize the necessity of being able to fully control the

standard of treatment which patients in their institutions should receive. Only a few superintendents, out of the great number in our country, are today endowed with sufficient authority in this matter. Unfortunately, there are too few superintendents capable of exercising intelligent and judicious supervision in medical matters.

Primarily, the welfare of the patient in a hospital is in the hands of the board of directors or trustees. Their responsibility to the patient can be fulfilled only when they have provided a competent staff and conscientious superintendent, and have given them full authority to maintain the standards of all departments — surgical, medical, laboratory, nursing, commissary, etc.—on such a basis as they would desire, were they also to become patients.

At the present time, the legal restrictions in the various states unfortunately are not sufficient to guarantee the proper standards of surgical excellence. The hospitals, however, are in position to refuse to become parties to other than competent and skillful work in the handling of the unfortunate sick in their charge.

A position on the board of trustees or directors of a hospital is a great public trust; that trust must be observed and realized to a greater extent, and it is our duty in every rightful manner to assist hospital boards and administrators to a full understanding of their responsibilities to the public. They cannot relieve their conscience with the inference that the treatment of the patient lies with the doctor's conscience and that they are to supply only the facilities for carrying out his work. Many board members must be enlightened upon this particular phase of their responsibilities. There can be no doubt that many board members would shrink from the knowledge of conditions within their hospitals, were they informed of the true state of affairs.

We know of several large hospitals where apparently successful administrators are in charge, but whose success can be judged, unfortunately, only from the economic standpoint. The purpose for which the hospital exists is not being met. Incompetent sur-

geons and physicians work daily within their walls, with the full knowledge of those in charge. Unnecessary and unskillful operations are performed almost daily, and many patients suffer unnecessarily and lose their lives in these "successfully" conducted hospitals. We know that this state of affairs exists widely and in hospitals of all religious denominations.

It is said that competent hospital administrators are in wide demand. Is this really true? Are boards of trustees fully aware of the conditions within their hospitals and are they seeking men who will not only conduct their hospitals successfully from the standpoint of the hospital treasury, but also for the welfare of the patient? I know of men fully competent who would accept such positions. I know of others filling such positions who, from our standards, are totally incompetent, yet whom boards of trustees would be reluctant to displace on account of their recognized ability to show, at the end of each fiscal year, a substantial balance in favor of the institution.

We of the American College of Surgeons should be satisfied only when our hospitals are conducted with the sole idea of what is best for the patient. Hospitals will furnish facilities satisfactory to us when this is met and when they will refuse to permit incompetent physicians to operate and treat patients within their walls. The plea is frequently made that the patient must be cared for and that the physician is the selection of the patient. This position is absolutely untenable, hence it is the duty of hospital authorities not to shirk the responsibility of freely establishing the important fact that the physician in charge must be qualified for his work, and it is also their duty to decline to receive a patient when conditions as here outlined do not obtain.

Since the laity, by the very nature of things, expects these obligations to be discharged by

the hospitals, why should not a properly conducted hospital, fulfilling its every obligation to the patient, make known to the community, through proper channels, its position in these matters and be rewarded by the increasing gratitude and confidence of its patients? Let me emphasize here that any hospital which is unable to advertise these facts to its patrons, should either remedy the situation or discontinue its work. And since it is indisputable that there are few hospitals properly conducted which can finish the year with a surplus, it must be admitted that a financial deficit is more commendable than is a deficit of obligation to its patrons.

The minimum of responsibility which the hospital may rightly assume is that which its board of trustees would wish any hospital to assume towards them as patients. Too frequently boards of directors carry their responsibility to the patient in a dual manner; they employ a superintendent to conduct everything but the medical department. The medical staff is but one department of his institution, and the competent superintendent or satisfactory administrator should know better than anyone else whether the patients in his institution are getting proper treatment.

It is our duty to inform boards of directors of the true conditions, to assist them in remedying the same, and to insist that they be remedied. If some directors can be shown wherein they are failing tremendously in the prime object of their institutions, I believe that the treatment of patients throughout the land will be materially improved. If, after those in charge of such institutions have been given every opportunity to see the true state of affairs, the hospital still fails to discharge its obligations to its patients and establish proper efficiency and organization, it may be necessary forcibly to impress upon administrators and trustees their vital responsibilities.

THE HOSPITAL LABORATORY

By FRANCIS CARTER WOOD, M.D., NEW YORK CITY
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THE American College of Surgeons has set itself a difficult and exceedingly important task. The standardization of hospital laboratories implies the standardization of the profession as well, and such a reform invariably meets with opposition from the very persons and institutions that need it most. Of course, in a strict sense, it is impossible to standardize; all that can be done is to grade institutions and physicians according to their capacities—a very difficult thing; and then by the use of reasonable publicity to force reforms. The number of beds, the number of nurses, the architectural perfection of the building, and the extent of the laboratories have little numerical relationship to the efficiency with which the proper functions of the hospital are carried out—that is, the medical and surgical care of the patients who enter. We all know of small hospitals with meager equipment, poor buildings, and no laboratories, where the most scientific, careful, and successful surgery is done. We also know of institutions with marble halls, a vast amount of equipment, and excellent laboratories, in which the intellectual endowment of the attending and laboratory staffs is so poor that the patients suffer and the results are very unsatisfactory. It must, therefore, be kept clearly in mind that any progress which may be made by inspection and ultimate publicity will be permanent only if intelligent support is afforded to the improvements asked for by the physicians of the boards of managers of the hospitals. This is especially true of the laboratory. Water does not rise above its own level. The best laboratory equipment and staff will be of no avail unless cordial support is given to the workers by the clinical staff and intelligent use of the reports furnished is made.

These facts granted, the functions of the hospital laboratory may be outlined. They are, first, and most important, to offer to the

attending physicians and surgeons such information as will assist them in caring for their patients in the best possible manner; second, to furnish facts which will be of educational value to the physician or surgeon himself, his staff of interns, professional guests, and students; and, third, to advance the arts and sciences of medicine and surgery.

It will be granted without further discussion by most of this audience that, while many hospitals give good service so far as staff and nursing are concerned, but few of the hospital laboratories in this country fulfill all their functions, for reasons which are perfectly obvious: first, lack of money for laboratory salaries and equipment; second, lack of control over patients and difficulty in obtaining autopsies; third, scarcity of well trained men to study the patients.

In estimating, therefore, what the laboratory should be, we have to take into consideration the fact that many hospitals, especially in the smaller communities, have only a very limited amount of money, and that all available funds must be used in providing the patient with food, nursing, and drugs, and furnishing the necessary instrumental facilities for operative procedures, so that little or nothing is left over for laboratory or X-ray work. There are, however, numerous hospitals, perhaps the majority, both municipal and private, which have sufficient funds to provide moderate space and equipment for laboratory work, but cannot afford to pay salaries for laboratory men; and there are, also, a few exceptional hospitals, either municipal or private, which have large, well-equipped laboratories, with ample appropriations or with sufficient income from endowments to permit of the carrying out, not only of routine diagnostic work, but also of more or less research. In this country, however, such laboratories as these last can be counted almost on the fingers of one hand.

To clarify the discussion, the question of laboratories may be considered under three heads:

I. What is the irreducible minimum of laboratory equipment, both in apparatus and in personnel, without which the patients of the hospital will receive inferior treatment?

II. What is the mean or average equipment for a good hospital of two hundred beds?

III. What is the ideal?

I. The absolute minimum of laboratory equipment must, in general, include those things which are necessary for the routine examination of urine, sputum, faeces, blood, gastric contents, and spinal fluids, and for the bacteriological examination of throat and vaginal smears; a postmortem room and the instruments necessary for the performance of an autopsy; and facilities for the preparation of frozen sections in the study of tissue lesions. A proper system of record books should also be installed; very often such records are of medicolegal value to the hospital. Further details cannot be given in this paper, but we may be certain that nothing less than this equipment can be considered as permitting satisfactory treatment of medical and surgical patients. A budget of one thousand dollars per annum should cover the salary of a helper and supplies.

It may be safely assumed that in a hospital laboratory of this type the funds are insufficient to provide for the services of a capable pathologist to examine surgical tissues or to carry out bacteriological identifications, Wassermann reactions, and other serum tests. If, however, a competent man is available in the community, he may, by giving part time to each of several hospitals, be able to cover all the routine requirements in ordinary pathological work and get a fair salary from the combined institutions. If this cannot be managed, it may be possible to arrange to have examinations made by a state or municipal laboratory or through the courtesy of some private institution whose director is sufficiently interested in the material which he receives to do the work for nothing or for a nominal fee. It is perfectly possible to send specimens of tumors,

properly preserved in formalin, a long distance; and if the operator will take sufficient interest to include a reasonable history of the patient and a description of the growth, such material will often pay for itself because of the occasional occurrence of rare and unusual specimens. The time is coming when each state, probably through its public health department, will provide a central laboratory for the free examination of tumor material. Twenty-four states already do this, but this number is too small. Many states and many of the larger cities also provide for the carrying out of sputum examinations, Widal tests for typhoid fever, and Wassermann reactions for syphilis.

Generally, the personnel of a laboratory of minimal equipment must be very small; it is possible, however, to get much work done by securing at a comparatively small salary the services of a well trained laboratory helper who is not a physician, but who will do all the necessary work and do it satisfactorily. Women are now fitting themselves for these positions in rapidly increasing numbers.

The autopsies, of course, owing to the legal restrictions placed by state laws about the examination of bodies, must usually be done by a physician, but this is an advantage rather than a drawback, because of the educational return to the physician himself. Those members of the profession who never see an autopsy are very easily distinguished; they know exactly on which valve of the heart are to be found vegetations which cause murmurs; they have a cheerful way of overlooking strangulated hernias, intestinal obstructions, pneumonias in old people, gastric ulcers, and, above all, carcinomata of the internal organs. It is hard to impress on the average college graduate the fact that his education really begins when he leaves the medical school and is not completed even after a year or more as intern. This criticism, which we all know to be true, is justified, not alone in the country districts, but even more in the larger cities where much of the finest work is done, and, also, much of the poorest. The country doctor is not able to escape the consequences of his errors; when he tells Mrs. Jones that she has only a little

indigestion and she dies shortly after of cancer of the stomach, every one in the neighborhood is perfectly well aware of the fact. The practitioners of the larger cities can commit such indiscretions without their coming to the knowledge of their clientele.

II. Let us now consider in a very general fashion the average laboratory, by which I mean the laboratory which should offer complete diagnostic returns for the physicians. This implies an institution to which is attached a physician who has been trained in pathology and who has either paid assistants or men who serve as pathological interns. It implies either that the pathologist is a competent bacteriologist or that he has an assistant for the bacteriological work. Nowadays, also, we are beginning to feel the need of a chemist, especially in medical diagnosis and treatment. I have only to speak of recent advances in the treatment of diabetes, of Bright's disease, and of cardiac lesions, to remind you that accurate chemistry has come to stay. Surgery of the kidney has been greatly helped of late by analytical methods, quite as much as surgery of the stomach by the X-ray.

The pathologist should, if possible, be a full time man, so that the surgeons may have available his expert knowledge in making a hasty diagnosis from material removed during the course of an operation to determine whether a tumor is malignant or not. All our advances in the surgery of cancer have depended upon the more accurate training of surgeons in pathology, and this is best accomplished by having constantly at hand a man to do frozen sections. The pathologist should have the same rank as an attending physician and should be a collaborator with his practicing colleagues, rather than a paid helper to assist in diagnosis. If it be made plain that faithful attention to his work will ultimately be rewarded by a clinical position, the best type of man may be obtained. If no future be held out to such a man, there will be the usual story of annual resignations to take up practice and thus gain a livelihood. This or a teaching position is the only future for a pathologist, and professorships of pathology are few in number.

The old days, when many a hospital graduate thought that after a year or so in the dissecting-room spent in learning the names and relations of all the smaller vessels and nerves, he was competent to be a surgeon, have passed away. To-day we are beginning to hold the surgeon to a higher standard and to realize that he had much better spend a couple of years, while he is waiting for a practice, in studying the pathology of tumors, the nature of infection, and the processes of repair of wounds, rather than to spend them in a course of demonstrative anatomy. If a man has had a good course in bacteriology, it is not necessary to tell him much about surgical asepsis. If he has spent six months in a laboratory, he will need a frozen section in not more than one tumor out of a hundred, but will be able to make a diagnosis on gross inspection. If he has studied the process of repair, he will know that it is far more necessary to remove dead or foreign tissue and cleanse a wound mechanically than it is to flush it out with antiseptics. Even the physician is benefited by a little bacteriology; he is not so likely to fill his patient full of commercial vaccines, and on the basis of three carefully observed clinical cases, to announce that such and such a firm's products are capable of curing all varieties of malignant endocarditis.

These are a few of the many reasons why there is urgent need for the development of our hospital laboratories as teaching institutions for the junior members of the staff. The running cost of this type of laboratory, properly equipped to carry out all the necessary diagnostic procedures for the modern treatment of disease will, in a hospital of two hundred beds, fall not far from ten thousand dollars a year, in these days of high prices. Part of the expense can be met by charges to the private patients for pathological work. Research of very great scope cannot be expected from such a laboratory; the routine work will take most of the staff's time.

III. For the ideal institution which is, in addition, to extend the boundaries of medical and surgical knowledge, a larger staff, more supplies, and better equipment are necessary. But even these are relatively unimportant

compared to the facilities for observation and investigation of patients in collaboration with the clinical staff which must be possible to the workers of the laboratory if the highest achievement is to be reached. The pathologist himself should be a full time man, of high research ability and, if possible, with some teaching connections which will, without absorbing too much of his time, keep him in touch with students and members of a university staff. He should rank in the hospital as an attending physician in order that he may have sufficient authority over the interns and nurses to obtain such specimens as the study of a case may require. He should have ward privileges so that he may have a bed or two for metabolism work. One of his assistants should be an assistant attending physician to the hospital, the other an assistant attending surgeon, and both should be on one of the regular services so that they may have full access to the patients in the wards. This brings the wards to the laboratory and the laboratory to the wards; it trains two men who will be ready after four or five years to step into responsible clinical positions with far better knowledge of medicine and surgery than the average hospital graduate. The opportunity of seeing the patients stimulates interest in the laboratory work, and the patients are helped because the laboratory work is better done.

For the carrying out of medical research, therefore, ample time, ample material, and complete control of patients are necessary. No one can do good research who is hurried or driven to rapid publication. Unfortunately, many of our larger institutions bear so heavily on their men in calling for voluminous production that much of the work shows evidence of haste and inaccuracy.

Very few lay hospital boards of managers see the importance of spending the hospital funds for contributions to the science of medicine, and they will encourage research only when a large endowment is available. And even then it is astonishing how many overhead charges can be laid to a research fund. But in almost all instances such men are anxious to do their best for the patients, and a judicious educational campaign will

often bring good results. It is hard for a business man to see his way clear, especially in the case of an institution supported by charity, to spend money for research, which is very expensive and often brings little or no practical return. The sensational featuring of the work of certain individuals and institutions has not helped very greatly the cause of medical science.

There are really no limits to the amount of money which can be profitably spent in such a laboratory, but the practical limits imposed are usually lack of ground space or buildings in which the laboratory can be housed, the necessity of removing the strictly experimental portion of the laboratory to a distance from the wards because of the noise of the dogs which must be used in metabolism work, etc. This has a tendency to separate the research and the practical sides of the laboratory, since the latter must be in close juxtaposition to the patients.

The secret of successful research is not, however, in money or buildings. No great work is ever done in research except by a great man, and the American method of assuming that a large income will produce valuable scientific returns is not wholly warranted. Excellent and even valuable work has been so produced, but Harvey, Claude Bernard, Pasteur, and Koch did most of their best work with few facilities and less money. Given the best men, the achievement will follow. For this and other reasons, such research hospital laboratories are best linked with a medical school, because of its resources and the facilities for getting volunteer workers. But here again the best men are not those who work for salaries, but those who work for real love of investigation.

America is beginning to occupy among the nations of the world a prominent place as regards her contributions to medical science. But such contributions have come from relatively few institutions, and many of these not directly connected with hospitals. There is, however, no institution so small that it cannot furnish interesting material if properly observed, and the great growth of the hospital system in the United States and the tendency now so generally observable for

people to go to a hospital for medical care instead of remaining in their homes, mean that the scientific opportunities are growing; and unless the laboratory receives as much attention as the operating-room and the medical wards the patients will not have the good care to which they are morally entitled, nor will this country gain the dominant position in medicine to which the natural ability and energy of our physicians entitle it.

If the American College of Surgeons, including as it does the leading men of the country, can by a judicious and sympathetic investigation and rating of hospitals raise the standard of hospital practice in the wards, it will of necessity simultaneously elevate the standard of the laboratories. To accomplish this in the next few years is no mean task, and one worthy of the purposes for which the College was founded.

CASE-RECORDS AND THEIR VALUE

BY E. A. CODMAN, M.D., F.A.C.S., BOSTON
Head of Codman Hospital

THE science of medicine is in an experimental stage. Every time treatment, whether operative, mechanical, or medicinal, is given, an experiment is performed. It is no less an experiment because it is made on the human subject. In every experimental science, records are made of each trial, giving all necessary details, and especially noting the result. Singularly enough, in these human experiments which we constantly perform in our hospitals, it is not usual to make special effort to see that the results are systematically recorded, even though the details of the operations or treatments may be written down in the clinical records. If we were using dogs in the numbers that we are human beings, there would be a great cry raised against our brutality for causing needless suffering. We should defend ourselves on the ground that these experiments were necessary to science, that they were carefully conducted and recorded, and that the victims' sufferings were minimized in every possible way. Curiously enough, the public does not ask us to be so particular about our fellow beings, and, as a matter of fact, we could not well defend ourselves on the ground that our clinical experiments are scientifically recorded and the results always noted and studied.

Old-fashioned physicians and surgeons will tell you that the science of medicine is still too imperfect to permit us to trust the public with the truth about the results or the complications incident to treatment. There has

been a habit in the medical profession which even now is so justified by custom and usage that it is next to a moral law. This habit I will call "poetic license." No matter what they have preached in their lectures or written about scientific accuracy, all professors of medicine and surgery have by example taught students that, in actual practice, it may be right to conceal from the patient the truth about the case. In a way, the public has forced this habit upon us. How often the husband and wife come to us separately, and each tell us to conceal from the other the fact that cancer is present in the one or the other! The victim tells us that the husband or the wife cannot bear to know the fact, and the husband or wife begs us to conceal the truth from the victim. I could carry illustrations of this habit of "poetic license" much further, but it is sufficient for us all, laymen as well as doctors, to confess its existence. Clinical teachers make free use of it, and their students go into practice — and make free use of it. The question is, has the time come when we can face the facts in a truly scientific manner? Can we let others look at the results of our experiments? "The wise old-fashioned physician" will tell you that it is not yet time, but the modern surgeon who can demonstrate success in perhaps 95 per cent of his experiments is becoming ready to let the public be acquainted with the facts. Unfortunately, even now, the modern physician is not very keen for direct truth on the clinical side, although to the laboratory side

he gives more scientific energy than does the surgeon.

If, however, we put considerations of human nature aside, we can take it for granted that in an experimental science it is important to make record of our experiments and especially of their results.

The truth should be recorded even if expediency keeps the records under lock and key.

Case records are made for three purposes. The first we can call scientific, that is, to record the facts observed about the case, so that these facts may be in available form for so-called scientific studies which the attending physician or surgeon or some other (qualified!) person may make. Second, for practical purposes. For instance, if a patient has been in the hospital and returns for further treatment, we want to be able to find out what his condition was when he was in the hospital before, and what were the details of his treatment. The third use of records is for medicolegal purposes. The law requires some form of record, especially in cases of accident or crime.

It needs no argument to show that records should be made for these three purposes. In most hospitals there are some such records, however inaccurate and inadequate they may be. I wish to suggest a fourth use for case records — as data to form a basis for study to increase the efficiency of the hospital.

It is a singular fact that this idea is a relatively new one. Heretofore, trustees have been content to know that their patients have been *treated and cared for*. They have not concerned themselves with the efficiency of the treatment given. Each member of the staff has done the best for his patient that his time and conscience has allowed him to do, but each member of the staff, being in a glass house, has not cared to inquire into the efficiency of other members of the staff. As for the superintendents of hospitals, they have had more than enough to do to look out for their share of the work, without getting into hot water by inquiring into the results obtained by the physicians and surgeons. In fact, we must confess that it has been the duty of

no person or department in most hospitals to inquire into the efficiency of treatment. The vague reputations which members of the staff earn in the hospital and in the community has been the only criterion. And in the making of these reputations personality dominates efficiency.

My own interest in hospital records is largely from this point of view of using them to increase efficiency. I advocate the end-result system of hospital organization which was recommended by a committee of the Clinical Congress of Surgeons.¹ This system is perfectly simple, the only difficulty with it being its revolutionary simplicity. It requires straightforward, truthful answers to these questions:

What was the matter with the patient?

What did the doctor do to him?

What was the result?

If the result was not good, what was the reason?

Was it the fault of the doctor, the patient, the disease, or the hospital organization or equipment?

Heretofore, in hospital organization there never has been a bona fide attempt systematically to fix the responsibility for the success or failure of each case treated. I claim that our record system should enable us thus to fix responsibility, and that it should be *used* for this purpose. I claim that medicine is already enough of a science to enable us to use the great principle of comparison as in other sciences. Records we must have, clear, honest records, no matter how brief, if they fearlessly face the facts. If we do this, our records will be of more scientific value than at present. They will also cover the practical uses and the medicolegal ones. So far as the medicolegal uses go, this new type of record will perhaps be of more value in the execution of justice in general than to each hospital in particular. At present the community allows hospitals to evade medicolegal complications, but the time is coming when the hospital must take more responsibility and be able to show that it is at least recording and analyzing the results of its experiments. The absence of a system to fix the responsi-

¹Surgery, Gynecology and Obstetrics, June, 1914.

bility for each experiment should be more culpable in the sight of the law than the failure of the experimenter to perform a carefully conducted experiment successfully.

In hospital organization, we may profit by the teachings of the modern science of efficiency engineering. The sixth of the twelve principles of efficiency demands the existence of reliable, immediate, adequate, and permanent records. "Reliable" includes the ideas of being accurate, honest, authoritative and complete. "Immediate" means available to those interested; practically indexed by name, disease, and anatomic region; clear; brief or abstracted; easy to handle and to study. "Adequate" means being purposeful, for instance, quite different in a hospital connected with a university from those in a hospital in a mining camp, but accurate and fearless in both. "Permanent" means too valuable to lose; it also refers to the materials used in the making and to the importance of keeping the completed volumes under lock and key (recognizing human carelessness). Nevertheless, being permanent does not refer to perpetuating old faults. Harrington Emerson in his chapter on records says that it has not been unusual to find in the records of a corporation "a great variety of monthly tabulations, and when inquiry is made it is finally unraveled that twenty years before, some president wanted a certain set of records, and his successor wanted a different set, which was started in parallel, that a third and fourth incumbent added their requests, but the old tabulations continue to be made and painstaking clerks work their monotonous lives away in neat compilation that no one has looked at, much less used, for a decade."

In the special subject of hospital records, the efficiency experts would need one more important adjective and that is "educational." Perhaps they include it under "permanent." The young doctor must necessarily get his training in a hospital, and one important element in his training is the writing of records. I have no fault to find with our attempt to make this combination of scientific records and opportunity to learn by experience, except to say that, today, in most hospitals I

fear that the records are left *entirely* to the students and are not even signed by those actually responsible for the treatment and its results. In my opinion the member of the staff responsible for the treatment should at least O. K. the record before it is filed. A staff that is too busy to do this needs more help, and should not be allowed to corner the material of that hospital. The permanency of hospital records, if signed, would be an incentive for accuracy and efficiency for all concerned.

The committee of the Clinical Congress of Surgeons which devised the end-result system believed that it was possible to recommend a system of records which would be the *greatest common divisor* of all hospital records — a system so simple that every hospital, large or small, could use it. The larger the hospital, the greater its endowment or other facilities, the more elaborate the records might be, but, no matter how detailed, they would still be capable of being abstracted into the form of this greatest common divisor. Thus, a record in a small hospital might be directly compared with the *abstract* of a record in a great hospital. We felt that the important facts under the eight headings which follow *should be known about each case in all hospitals*. Brief statements of these facts would be the minimum amount that any record should contain. The more elaboration there might be in the details of such records, the more should the hospital be congratulated, but every hospital should have for each patient a uniform card comparable with that of every other hospital and containing besides name, address, etc., brief statements under the following headings:

1. A *permanent* address of some relative or friend who would forward mail a year or more later.
2. The symptoms or condition for which relief was sought.
3. The diagnosis accepted as a basis for treatment by the person responsible for, or giving the treatment.
4. The name of the person who took the responsibility of treating the patient or the names of those to whom he delegated important steps in the treatment.

5. The important points in the method of treatment, whether operative or otherwise.

6. The complications which resulted from, during, or after treatment.

7. The final diagnoses at discharge, authoritatively O. K.'d for index filing.

8. The result, when time has elapsed for this to be determined, or a brief annual statement of the patient's condition.

Our committee devised cards to be used for this purpose, and an index chart to which the numbers from the cards could be transferred in such a manner that the chart would be an immediate index to all diagnoses. The use of these cards for the analysis of errors and waste, in order to prevent similar errors and waste in the future, and also to ascertain the persons and methods to whom success in

treatment is to be attributed, constitutes the end-result system of hospital organization. It inevitably will lead to publicity, and as is usual in publicity given to other important matters of vital interest to the people, it brings up the questions of special privileges, vested interests, economic advantages, trade routes, educational concessions, and the almighty dollar. Any one who is interested in my personal views on these aspects of the end-result system will do me a favor by reading the report of my own hospital, a copy of which will shortly be sent to every member of the American College of Surgeons who cares for one. Besides my personal views on some of these subjects this report will contain a practical illustration of the use of the system.

THE HOSPITAL AS AN EDUCATIONAL CENTER

By ALLEN B. KANAVEL, M.D., F.A.C.S., CHICAGO
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THE hospitals of this country owe their existence to the generous endowment of the public at large and the support of the members of our profession, and the time has now come to ask whether the institutions so endowed and so supported measure up to the standards demanded of them.

Hospital history demonstrates that there has always been a tendency to progress from the custodial and remedial institution to the teaching center. The Mohammedans maintained excellent hospitals at Bagdad, Damascus, and other cities, first custodial, later remedial, but with the passing years they became teaching hospitals, reaching their highest development in the magnificent Al-Mansur at Cairo, well equipped with lecture rooms and other facilities for instruction. The European hospitals were custodial or remedial until 1745, when Van Swieten organized a clinic of twelve beds in the Bürgerspital in Vienna. Bedside instruction was first introduced into France by Desbois de Rochefort in 1780. A chair of clinical medicine was established in Edinburgh in

1741, although Guy's Hospital was established and teaching carried out in the wards in 1723.

In the New World, also, the hospitals followed the same educational line. The first hospital to be established was by Cortez in 1524 in Mexico. The Hotel Dieu was established in Canada in 1639; the first hospital in what is now the United States, on Manhattan Island in 1663. For many years these and other hospitals established were only remedial institutions; but soon the teaching hospital began to develop here also, finding full development during the nineteenth century in the magnificent hospitals founded largely in association with medical schools. With the onset of the twentieth century, however, the number of hospitals increased with amazing rapidity, located in every community, under new conditions, without the restraining influences of university life, yet under the supervision of most competent physicians, an enormous potential power for medical advancement if properly directed.

This representative gathering from all parts of the United States has a right to ask

if these institutions measure up to the highest ideals of hospital life and to formulate, if possible, plans for utilizing this great force in extending medical knowledge and securing for the public the most efficient service.

The educational functions of a hospital may be grouped in four divisions: first, as to interns; second, as to the staff; third, as to the profession at large; and fourth, as to the community.

What should a hospital teach its interns? First, medical knowledge; second, ideals; third, thoroughness; fourth, imagination. It is the duty of the staff and hospital authorities to cultivate all of these. In an entirely praiseworthy desire to "get on" in his profession, the intern easily mistakes the form for the substance. He sees men with good bearing and poor training apparently successful in practice. He does not know that this is the logical result of our earlier poor system of medical training, and that our newer ideals and better training will inevitably relegate these men to an inferior place, that, while now they are apparently the recipients of the respect and confidence of the community, as the years carry them into the lane of cypresses, they will lose that respect and confidence which is the glory and happiness of old age. That there is too much carpentry in surgery and too great slothfulness in medicine no one will deny, but that our profession or the awakened laity will tolerate it in the next generation is open to serious doubt. These facts should be impressed upon the intern. He should know that, in any community in which he may locate, competence, a full knowledge of the scientific principles of medicine and surgery, and an ability to apply them now constitute a *sine qua non* to a successful practice. Therefore, the hospital should be so equipped and the staff of such a grade that the intern may leave prepared in every way. He should be taught methodic history writing and its execution demanded of him. Careful examination, physical and laboratory, should be insisted upon. Independent diagnoses should be encouraged.

The imagination of the intern should be developed by favoring research. Research in fundamental branches may be a function

of the medical schools, but clinical research belongs properly to the hospitals, and that hospital which favors it will find its efforts returned a thousand fold in the more careful work done by its staff and interns, in the general reputation the hospital will have in the community and in the confidence that will be imposed in it by the profession, the tangible result of which will be seen in the number of patients who will seek its doors. Meanwhile, the intern has been sent out to practice his profession with a medical training that assures him a practice, with an ideal that does honor to his institution, and an imagination that will enrich his life and perchance add something to the sum of human knowledge.

In this material age care should be exercised to choose a staff wisely. Hospital trustees should realize that the possession of a large practice is not necessarily the badge of efficiency in our profession and that if they choose their staff on the basis of income to the hospital, they may soon awake to a realization that the standard has been so lowered that it has lost the confidence of the profession and the community. With the general diffusion of medical knowledge, the laity is rapidly learning to demand thorough training of the physician. The hospitals should anticipate the future and recruit their staffs from the most scientific of the profession.

Every hospital staff should demand and every hospital furnish all known equipment for diagnosis and scientific work. Hospitals originally took the place of the home in that the sick could be cared for better in a material way. Now a hospital is a diagnostic center and every board of trustees should be alive to this new phase of institutional life. This demands chemical and pathological laboratories, generally with trained attendants, facilities for filing case reports, X-ray equipment, etc. As a protection to themselves, hospital trustees should urge post-mortems for all patients dying in the hospital, and the staffs should have the scientific honesty to support the demand. There is no surer way to weed out incompetents than this. It protects the hospital, the competent physician, and the community. Point me a physician who requests post-mortems, and I

will point to a safe, able practitioner. Point me a hospital officially favoring and urging post-mortems and I will prove to you that it is among our best institutions.

The relation of the hospital to the profession at large presents several unsolved problems, and the following suggestions may not be considered as practical now, but let us remember that we are building for the future.

The medical school sends the student from its doors with a diploma asserting that he is qualified to practice medicine, a polite fiction that we have accepted while at the same time belying our acceptance by insisting that the student should serve an internship. Beyond this neither the state nor his alma mater has gone. Any further knowledge the practitioner may acquire can be secured only through his individual practice, or by travel and study. But many members of the profession cannot leave their practices and must secure their development from knowledge brought to them. The public has contributed millions for medical education in the hope that the sick may secure better aid, and the school or hospital that accepts it tacitly agrees to fulfill that obligation. Does that obligation cease when the student leaves its doors?

The state brings every year new agricultural knowledge to the farmer's yard by means of traveling lectures and exhibit cars. Is the production of food of more importance than the preservation of health? Yet the physician must continue his education himself at great sacrifice of time and money. Should not the medical schools or the state in addition to assuring the student a good medical foundation follow the intern not only into the hospital and supervise his training there but also into his chosen field and provide him with thorough extension courses, and cannot this further training of the practitioner be done best through these various institutions that are springing up in every community? All hospitals would be better for some university supervision and would certainly develop a higher function if they acted as the teaching center for their communities. This would raise the standard of the hospital, center professional life about it, and develop the profession as a whole. This would

necessitate an inclusive hospital instead of an exclusive hospital. Staffs should be chosen from the entire body of the profession for their teaching ability and their scientific training. The members should be considered as university extension teachers without special privileges except those always accruing to special training and competence. This teaching might be done under the auspices of a parent university or the state.

The public has always had unstinted praise for knowledge, and in proportion as our profession demonstrates a real scientific spirit, the moral and material support of the community may be expected. No propaganda will be needed then to educate the public as to the fallacy of faith cures, osteopathy or chiropractics, for the rise of which we ourselves are primarily responsible, in that they are the heritage of our aloofness from the public and the mystery with which we have clothed our profession. Science needs no mystery, knowledge no mask, and competence no propaganda. The laity must be taught by lectures and demonstrations under proper auspices. The public is more ready to help us and understand our problems than we have been to take it into our confidence. To win this confidence the staffs and the trustees of the hospitals must have the right ideals in medicine. Efficiency of the one and service divorced from material advantage on the part of the other must be our ideals. Dividends must be sought in scientific knowledge, in the cure of disease, and in the amelioration of human suffering, rather than in dollars and cents. But let no one doubt that the latter will follow inevitably in the train of the former. The trustees are anxious and willing to do their part but they must be taught the difference between a custodial and remedial hospital, and a scientific hospital. The trustees and superintendent must cease to feel that their duty ends when they have provided food and beds for patients. Carpentry in surgery must end. Laxness or laziness in diagnosis should be branded as a crime. The hospital must become a diagnostic and teaching center if it is to realize its highest ideals of service to the physician, the patient, and the community.

THE TRAINED NURSE

By ANNIE W. GOODRICH, NEW YORK CITY
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THE general agitation and the increased demand upon days already overfilled caused by our present international crisis have made impossible the careful study and analysis of the subject upon which you have asked me to speak. It is therefore with "a plain tale from the hills" of a long practical experience that I come before you at your request today.

Since the request was made in 1911 by the National League of Nursing Education that the Carnegie Foundation undertake a study of schools of nursing in the United States, encouraging and even notable advances have been made in nursing education. A more definite recognition of the professional status of nursing has been accorded by educators, the medical profession, and the public at large. The inclusion in health programs, whether federal, state or municipal, of nurses in ever increasing numbers establishes without question the social value of this public servant. One or two illustrations may serve to bring sharply before us changes that have come about so gradually as hardly to be appreciated even by those directly connected with the field. In a report of the year's progress of the University of Cincinnati, Mr. Rufus B. Smith says:

The most important permanent change in the course of instruction of the University has been the making of the School of Nursing and Health of the Cincinnati General Hospital, a department of the Medical School of the University. . . . This enlargement of the sphere of university education finds precedent and justification in the University of Minnesota, the University of Indiana, the Washington University of St. Louis, and Columbia University in New York City.¹

And an added and interesting evidence of the changing attitude toward nursing as a profession is presented in an editorial in *Science* referring to the step taken by the University of Cincinnati as follows:

The University of Cincinnati has taken over the School of Nursing and Health of the Cincinnati General Hospital and has put it under the im-

mediate direction of the Dean and Faculty of the College of Medicine. The University has already been given control of the laboratories of the hospital and through its medical faculty is doing all the medical, surgical and research work at the hospital. Appreciating the service rendered to the people of Cincinnati by the medical faculty, the city authorities requested the University to undertake the direction of the School of Nursing and Health also. The University will thus be responsible for all the educational and scientific work of the entire hospital and its various branches. When the new medical college building is completed, as it is expected it will be early next year, the work of the Medical College, the Pathological Institute, and the School of Nursing and Health will be assembled in one place as they already are in one organization. Nursing will become a skilled and learned profession to a degree far beyond its present attainment. The advance of modern scientific methods of treating the ills of mankind has already forced the issue upon medical training. That inadequate preparation of nurses and exploitation of them by so-called training schools will be eliminated is an inevitable next step. A nurse should have a liberal and broad education, languages, history and the social and physical sciences, and she, like the physician and dentist, should keep up with the developments in her own and allied professions. Carried out in this way nursing becomes a dignified calling demanding for success a comprehensive university training.²

These encouraging evidences of advancement unfortunately only emphasize the importance of an investigation or study of these schools. Such wide differences should not be permitted to exist in the education of the members of a profession as are presented on the one hand by schools of nursing that are integral parts of, or closely associated with, universities; and, on the other, by the many hundreds of schools that are departments of hospitals, the clinical material of which is represented by a bed capacity ranging from fourteen or less to several thousand; the faculty of which in only an occasional institution presents an adequate and qualified staff, being limited generally to two or three members who are also charged with the administration of the institution — a force

¹ Editorial, *Science*, July 28, 1917, 126. Training School Administration and University Schools, School of Nursing and Health at the University of Cincinnati.

¹ University of Cincinnati Record, 1917, July, II.

inadequate for the protection of patients whose care is rendered by a student body; whose curricula is as varied from the standpoint of subjects and the hours allotted to them as are the general educational qualifications of the students who are to be prepared for a professional life by this course of education. With the exception of the State of California there are not a dozen schools in the United States that limit the working hours of their students to 48 a week, although it has been proved to be economically, socially and physiologically unsound to impose longer hours than these upon men and women in the occupational field. In the light of the hours of labor still required of the student nurse it is interesting to find an Englishman, in this time of shortage of labor, arguing for a six-hour day as the logical consequence of "the new understanding that it does not pay to overwork people."¹ This overworking of students would not be so extraordinary if it did not occur under the jurisdiction of the institutions of the community whose one concern is health. The fact that 77 hospitals are conducting schools in California with the working hours of the student nurse limited to 48 a week is conclusive evidence that these hours are possible.

Number of applicants. The recent efforts because of the war situation to interest young women in entering schools of nursing has been successful beyond all expectations. Literally hundreds have sought for admission to our leading schools within the past few months. The Presbyterian Hospital in New York, in the two months following the announcement of a course in connection with Columbia University, received 800 letters of inquiry. Johns Hopkins Hospital shows 976 letters of inquiry in the past four months, not including many from college graduates, asking if any shortening of the period of training was to be made, and it is further reported that a large per cent of those asking for such credit later sought admission for the regular course of three years. The tragic fact is that despite the many schools whose need of pupils is such that they are accepting applicants

whose general education falls to or below the eighth grade, these would-be students with high educational qualifications are lost to the profession, because even if referred to these schools they are intelligently unwilling to accept the conditions they find there and the kind of education offered.

We are therefore deeply grateful to learn that it is the intention of the American College of Surgeons to include in their program a study of training schools believing that such cannot fail to hasten this greatly needed standardization of nursing education.² A very superficial analysis of the data presented in the Survey of Schools of Nursing issued by the California State Board of Health,³ cannot fail to remove all doubt of the great need of this investigation. So closely does the information contained therein coincide with that furnished by the reports of the past nine years of the State Department of Education of the schools of nursing in New York State that we are of the opinion that the conditions in the schools in any state would not materially differ except in one respect, namely, the universal provision in California of the 48-hour week already referred to.

The most important questions to bring to your consideration today are:

First, what is the function of the nurse? and

Second, what content of education will equip her to fulfill this function?

The function of the nurse. We conceive the nurse to be a remedial agent whose services in all classes of society at frequent intervals and in intimate and prolonged association, afford her an almost unlimited opportunity for health education which is the keynote of preventive medicine. This educational opportunity of the nurse is briefly but strikingly presented by Mr. Howk of the Metropolitan Life Insurance Company, who says concerning the nursing service offered to their policy-holders for acute sickness and maternity care:

² I am not attempting to discuss in this brief paper the frankly commercial schools known as the short course or correspondence schools, though they are, from the fact that they are turning into the field of nursing many hundreds of women yearly, a force to be reckoned with and therefore should be included in any investigation of schools of nursing.

³ Survey of Schools of Nursing and List of Accredited Schools California State Board of Health, March 3, 1917.

It can be readily appreciated that a corps of trained nurses who make visits to 9,000,000 people a year are likely to exert a powerful influence in the education of these people in matters pertaining to their health.¹

In some of the fields to which the nurse is now called her function is almost limited to education, as for instance, under the tuberculosis division of the Departments of Health or as school nurse, but we contend that the value of the nurse in the general field as an educator is quite as great if indeed not greater. Who, for instance, would perform the wider service in preventing mental diseases, the general nurse who sees and understands the tendency toward mental deviations in the child, or the mental nurse who is only called when these tendencies have developed into a mental case? Is the instruction given by the tuberculosis nurse to the tuberculous patient and his family of greater preventive value than instruction by a well informed general nurse who finds her way into the unsanitary tenements before tuberculosis has invaded them?

Conceiving then, that we have in a corps of workers as numerically large as is the body of nurses a powerful instrument for the dissemination of knowledge concerning health and thereby for the prevention of disease, what shall be the educational preparation of this body and where shall it be obtained?

The content of nursing education. We are quite familiar with all the arguments relating to the impossibility of including in a three years' course all of the sciences required for a sound educational foundation and all of the specialties desirable. The scientific foundation should not be left for these three years. We heartily agree with the emphasis Mr. Pritchett places on the necessity of close co-operation between all institutions concerned with education. Much that he says concerning medical education may be well applied to nursing education. He writes:

Not only is the whole civilized world today bound together in the discussions of all questions of scientific, educational, and social progress, but also the people of a given nation are bound together by their common interests in such

¹ The Public Health Work of a Great Life Insurance Company, by H. J. Hawk, The American Review of Tuberculosis, August, 1917, p. 380.

questions. Education in any nation is one thing, not a series of separate and unrelated things. Under modern social conditions a nation will therefore inevitably lack not only industrial power but also social contentment and efficiency, if it fails to conceive its various educational difficulties as fundamentally a single problem to be worked out by the institutions related in the most vital way to one another and representing together a national conception of progress and betterment.²

Concerning the value of the sciences to the medical student he says:

Teachers of medicine readily admit that for students who have really mastered their elementary physics and chemistry and biology, medical education becomes a wholly different thing from what it is for those who have not gained that foundation, not only because the man so trained can begin at a different point, but also because he is familiar with scientific concepts, scientific nomenclature, and scientific methods of reasoning.³

How closely this relates to Lillian Wald's beautiful and practical conception of the function of the nurse of today:

Many there are, it may be, engaged in the routine of public health work, who have not crystallized for themselves the import of their task. They are sturdy soldiers, who do not ask the reason for the command. But there are also prophets among the nurses and among the students of social movements who see the veil lifted and who know that the great army of nurses is educating the people, translating into simple terms the message of the expert and the scientist.⁴

Students should not be permitted to enter schools of nursing unless they have completed the course in a secondary school or a recognized equivalent.

Both in secondary schools and in colleges we find courses in the sciences which might be demanded for the would-be student in nursing. California is already making such demands. Even so conservative a college as Vassar has provided courses for students, the subject matter of which should be part of the knowledge of every graduate in nursing. One or two outlines are particularly striking:

Advanced human physiology. Three lectures and four hours of laboratory work weekly. Lectures, recitations, special topics and their dis-

² The Carnegie Foundation for the Advancement of Teaching, Bulletin No. 6, Introduction, Henry S. Pritchett, p. xi.

³ Ibid., p. 9.

⁴ National Organization of Public Health Nursing, Address of the President, Convention at Atlantic City, June, 1913.

cussion, special readings, the microscopic examination of tissues, dissections and experiments. The laboratory is well equipped with anatomical models and the Harvard physiological apparatus for practical demonstration.¹

Metabolism. This course includes discussion of processes of metabolism with corresponding experimental work in the laboratory, detailed experiments in physiology of digestion and excretion, experimental tests of renal function, study of muscle metabolism, discussion of the physiological value of the various elements of food compositions, accompanied by experiments in special diet in the laboratory.²

Hygiene of the child. This course comprises prenatal care, infant development and care, development and care of the child to adolescence.³

Municipal and house sanitation. The principles of modern sanitation including such subjects as water, sewage and garbage disposal, construction of habitations and the hygiene of transmissible diseases.⁴

Charities and corrections. Sociological bearing of natural selection, heredity, environment, physical, physiological, psychological, moral, and social causes of abnormality, statistics of the causes of pauperism, history of the English Poor Laws, private relief, charity organization, public relief, almshouses, relief for the unemployed, including labor colonies and the tramp problem, dependent children, relief of the sick, insanity, statistics of the causes of crime, criminal anthropology, prevention of crime, principles that should govern the treatment of offenders, delinquent children, reformatories, prison methods.⁵

Practical experience is a very important matter for our consideration. The power of the nurse has been attributed directly to her close and constant attention to the patient. Not for worlds would we lose that priceless treasure that educators in other professions and vocations are seeking for their students, the practice field. The era of the *trained* nurse is drawing to a close. She will appear in the near future only in the history of the rise and fall of the apprentice system; but if history presents a faithful portrait she will be found there as an outstanding example of the value of a close relation between the student and the practice field. Despite many opinions to the contrary, a proper division of the three years and a careful study and provision of

the number of cases per student will make possible the inclusion of all the important services in the nurse's experience, not, however, to the extent of preparing her for specialization. The inclusion of these services will necessitate the requirement of courses in certain sciences already obtainable in high schools and the elimination of household duties, experience in which could also be provided through a pre-vocational course.

What shall be deemed the essential branches must be determined by a study of the needs of the community, not by the branches found in any given institution. We are all familiar with the fact that greatly as the hospital capacity has increased in the past decade it nevertheless cares or provides for but one-tenth of the sickness in any given community. This fact gives rise to several questions. First, does this one-tenth represent the sickness problem of any given community, or only those ailments that can be best cared for in an institution? Second, shall the emphasis in the nurse's training be placed on those diseases with which she comes in contact during her two or three years in the hospital or those branches which she meets during her professional life in the community? Third, and perhaps the most important, which branches, from the standpoint of the health of the community, is it most important for health workers to be informed upon and to attack?

The survey of hospitals maintaining schools of nursing of any state presents the majority as dealing mainly with surgery and with an ever increasing private patients' service. It also presents a number of special hospitals giving two or three years in their specialty. The survey of any community in the United States presents a higher infant mortality than is necessary, a maternity mortality that places this country the fourteenth on the list, a tuberculosis mortality that is higher than the maternity mortality, a rapidly increasing number of mental cases,⁶ and frequent outbreaks of communicable diseases. Nor does the war emergency reverse this situation as at first it promised to do. Reports from the

¹ Vassar College Bulletin, Vol. VI, No. 3, 5 and Annual Catalogue, 1916-1917, p. 112.

² Ibid., p. 113.

³ Ibid., p. 11.

⁴ Ibid., p. 1.

⁵ U.S.A.,

⁶ In 1917 there were in the hospitals having registered schools in New York State 53,021 beds, in the general hospitals 18,000; in the 13 state hospitals for the insane 37,043, an increase over the previous year of several thousand.

other side show tuberculosis, infant mortality, venereal diseases, mental and nervous disturbances to be even more terrible concomitants of war than the injuries that relate to surgery; all of the evils that are being struggled with in civil life, increased many times, call for large numbers of nurses who are experts in these fields.

Because two-thirds of the service of a given institution is surgical, is no reason why two-thirds of the student's time should be given up to that service.

In view of the fact that the curriculum issued by nearly every hospital maintaining a school of nursing almost invariably includes lectures and recitations on all of the branches of disease, it hardly seems necessary to emphasize the importance of theoretical instruction in connection with practical experience. But what is the relation between the theory provided and the practical field? An arrangement in any school whereby the laboratory work in chemistry, biology, or kindred subjects was given in one year and the lectures in another would be considered too extraordinary to discuss, yet just this method obtains in schools of nursing. For instance, the student may be attending lectures on surgery while she is obtaining her experience in the medical wards. It will be contended that it is impossible to arrange otherwise. It is under the present system, but that only emphasizes the absurdity of the system. When a school affiliates with another hospital, whether it be for a course in obstetrics, pediatrics, mental disease or medical nursing, it is expected that lectures and recitations in these subjects are included. If not, the school considers severing the connection. The readjustment required is possible. Such readjustments mean, however, that a school of nursing can no longer be carried on without an endowment or as a department of a hospital. While the University of Cincinnati presents a wonderful picture of what a school of nursing should mean, Harvard University presents an equally good picture of what a school of nursing might mean and does not. Grouped around the Harvard Medical School is a splendid set of buildings, modern in construction and equipment and representing most of the branches

of medicine. Nothing less than a university school of nursing, a part of Harvard Medical School, would be expected today, but such is not the fact. Two of the hospitals maintain their own schools and the work in all of the other institutions is mainly carried on by student nurses, not from these two schools. The students in any of these institutions do not have the benefit of all the variety and richness of clinical material which is available. It is incredible that a city of such vast resources and of such high educational standards as Boston should not yet have conceived that a Harvard School of Nursing would increase the nurse's efficiency almost a hundredfold. What a waste of human ability, what a waste of the community's money does this failure represent!

How many tenths of community sickness receive inadequate or unskilled nursing care in order that one-tenth may be provided with a free nursing service? What is the cost to the community of this inadequate and unskilled care? These are important questions to be answered through the proposed investigation. What part of the burden of the nurse's education should the hospital assume, the school assume, and the nurse meet? The hospital cannot carry the whole burden of the professional preparation that the field of nursing demands today, but if it cannot do this it should not maintain a school.

Miss Nutting of the Teachers College has extended the privilege of submitting with this paper her outline relating to the investigation of conditions of nursing education in the United States and the practical results that such an inquiry might produce. We wish, however, to emphasize the importance of a thorough analysis of the actual case experience of the student. It is a significant fact that while records of efficiency, records of nursing procedure and ward services were easily available, there was not a record found two years ago throughout the length and breadth of the United States that showed the actual case experience of the individual students in any school. Indeed, the information relating to the student's experience often suggests that the physical structure of the hospital rather than the physical being committed to its

care is the important factor in the nurse's education. A brief consideration of an institution presenting quite a usual picture will serve to illustrate. This institution with a bed capacity of 85 reports the following cases treated in one year.

| | | | |
|-----------------------------|--|------|--|
| Surgical | | 1186 | |
| Medical | | 702 | |
| Obstetrical | | 83 | |
| Children | | 32 | |
| Number of operations weekly | | 35 | |

There are 53 students in the school. The three years' service is divided as follows:

| | 1st yr. | 2nd yr. | 3rd yr. | Total in months |
|------------------|---------|---------|---------|--------------------|
| Diet Kitchen | 90 | .. | .. | 3 |
| Medical Nursing | 60 | 60 | 60 | 6 |
| Surgical Nursing | 60 | 60 | 60 | 6 |
| Obstetrical | .. | 60 | 60 | 4 |
| Children | 30 | 30 | .. | 2 |
| Operating Room | .. | .. | 90 | 3 |
| Night Duty | 90 | 90 | 90 | 9 |
| Tuberculosis | .. | .. | 60 | 2 |
| Dispensary | | | | |
| Contagious | | | | |
| Mental | | | | |

Let us for a moment consider the daily average of the clinical material. Estimating the duration of the cases as three weeks, we have the following:

Daily average of

| | | |
|-------------------|----|-----|
| Surgical Cases | .. | 45+ |
| Medical cases | .. | 41+ |
| Obstetrical cases | .. | 3+ |
| Children's cases | .. | 2- |

The period in the diet kitchen, three months in the first year, illustrates the need of pre-vocational courses. It is important that the student should have theoretical and practical instruction in the relation of diet to disease. An analysis of this three months in the diet kitchen, however, would show that the experience mainly relates to cookery, time for which should not be taken at the cost of experience in the nursing care of disease.

Night duty may offer a very rich experience or it may be of very little value. There is no indication in the record submitted of the experience the nine months' night duty provided. It is reasonable to suppose that this period was spent mainly in the surgical and possibly the medical wards. If but half of this period, four and a half months, is spent

in the surgical wards, this with the three months in the operating room, makes thirteen and a half months for surgery alone.

It is needless to call attention to the inadequacy of the children's service, but it is rather important to note that since there are 53 students in the school, not less than 25 must obtain this experience yearly and through service having a daily average of two cases.

In this schedule it will be noted that there is no period allotted to the dispensary service. One or two months is usually given to this department. An investigation will generally reveal, however, that every student does not have this service and those who do obtain it assist in the surgical clinics, since there only are their services needed. I am told that 15,000 children passed through a dispensary in New York in one year, but none of the students in the school of this hospital had the benefit of this experience. A most valuable field from the standpoint of a course in pediatrics was thereby lost to the nurses who graduated from this school.

We could present an almost endless list of illustrations of failure even in our best institutions to provide for each student a definite period of experience in the branches of nursing which the problem of the community demands, not because of their inability to procure such experience, but because of their dependence upon the free nursing service provided through the student body.

In addition to the list submitted I would refer to the inspection forms for nurses' training schools issued by the Louisiana and the Maryland State Boards of Nurse Examiners as suggesting data that would be of value in the proposed investigation.

INVESTIGATION OF THE CONDITION OF NURSING EDUCATION IN THE UNITED STATES

1. Problem of nursing education.
2. Why is an investigation necessary?
3. Outline of investigation.
 - (a) Work already done. Miss Nutting's Report on Educational Status of Nursing, U. S. Bureau of Education, 1912.
 - (b) Hospital and Schools.
 - (c) Separate Schools.

4. Investigation of various fields of work in which nurses are now engaged.
5. Inspection of Schools.
 - Hours of study.
 - Hours of teaching.
 - Hours of practical work — night and day.
6. Teaching by graduates; paid or unpaid; qualification of.
 - Teaching by pupils.
 - Lectures by doctors or other people, paid or unpaid.
7. Physical condition of the schools.
 - Dormitory or housing.
 - Conditions, board, laundry, etc.
8. Financial condition of schools.
 - Payment by pupils.
 - Payment to pupils.
 - Cost of maintaining pupils.
 - The capita cost per pupil for maintenance — for teaching.
 - Cost of teaching outside of hospital.
 - Cost of nursing by graduates, etc.

PRACTICAL RESULTS OF THE INQUIRY

- a. Exact knowledge of the wide variations in curricula and practical work.
- b. Definite knowledge of cost of education and saving to hospitals by utilization of pupil nurses.
- c. Practical program for changes in present method of education including:
 1. Separation of school from hospital, graduates of schools having choice of hospitals according to merit at graduation.
 2. Relief of nurses from maids' work in hospitals.
 3. Teaching of pupils by graduates paid for the purpose.
 4. Shortening of hours for hospital nurses.
 5. Raising the standard of nursing, attracting more students of a better class.
 6. Diminishing the number of schools by amalgamating many existing ones.
 7. Diminishing cost of instruction by such consolidation.
 8. Improving physical condition of nurses.

DISCUSSION

DR. ROBERT L. DICKINSON, Brooklyn: There could be no better example of the acute need of hospital standardization than what occurs every day in the Surgeon General's office in Washington. Any day the Surgeon General may issue a hurry call asking for detailed information regarding a hundred men who claim to be surgeons. The rank and promotion of these men depend much upon the amount of knowledge we have of them. If our hospitals at this moment were really standardized, what it would mean in the effectiveness of the medical divisions of the Army and of the Navy you can scarcely realize. . . .

At an annual meeting of the Taylor Society recently I was asked to open the meeting with a paper on hospital organization and scientific management. The Taylor Society is made up of efficiency engineers, of heads of great corporations, and of managers of great industries. I stated to the 200 men present that I had written to the Johns Hopkins Hospital, to the Massachusetts General Hospital, and to the Minneapolis General Hospital, asking for a chart of their organization in detail and a charted personnel and a statement of the duties of each important individual, and that these hospitals replied that they did not have such a chart and they could

not furnish me the detailed information that I asked for. The efficiency men could hardly believe my statement. "What," they said, "no co-ordination in your hospitals! Do you mean to say that the various departments of surgery are not under general surgery? Do you mean to say that the various departments of medicine, neurology, dermatology, and so on, are not under general medicine and are not correlated?" They were nearly dumfounded by the fact that the A, B, C's of efficiency adopted in our modern industries were not adopted by hospitals.

Dr. Codman spoke at that meeting and reported the failure of hospitals to check up the results of their work. Again these men from the industries wondered. In a Brooklyn hospital, for example, there are six different ways of giving an enema. Is there not *one* best way? And if so, what is it? There is always a best way of doing the simplest things. It is our business, our duty as responsible men in the profession, to find these best ways and then to act accordingly. The things we do and the things we use must be standardized, needles, catgut, and all. The A, B, C methods of standardization among industries have not yet been touched by us, but thank God, at last, we are going to adopt them.

DR. J. GARLAND SHERRILL, Louisville: It seems to me there is one point in regard to our records that we can now agree upon, and that is this: We can have a standard record, and I think it would be well that a committee be appointed at this meeting to take up the question of standardization of records. I believe that records may be standardized without serious inconvenience to any hospital in the country. Such a man as Dr. Codman should be at the head of the committee. But in any event what we want is a uniform record which gives essential information in each case. I therefore make the suggestion and trust that some action will be taken on it.

DR. JOHN A. HORNSBY, Chicago: I cannot resist the temptation to reply briefly to Dr. Dickinson's proposal to standardize after the manner of the efficiency engineer. The reason why the members of the Taylor Society have not made any headway among hospitals is because they are trying to do it by mathematics or by mechanical means. For instance, one of the exponents of standardization by the efficiency route undertook in a paper some time ago to standardize the operation of appendicitis. I think he undertook to tell just exactly how many movements the surgeon should make. Every move of the surgeon was anticipated by the chart, so to speak. Now that sort of thing, gentlemen, did not appeal to the surgeons, a thousand of them, who heard the address, and I doubt very much whether they would favor that sort of standardization either in medicine or surgery, or in hospitals. We all know you cannot standardize an art. The efficiency engineers have got a place with us; there is no doubt as to that, but they will have to study our problems from the standpoint of the medical profession before they can set mathematically guiding lines for us. These men are laymen; they are business people. They have not the slightest conception of what takes place in a hospital, and consequently have a very limited knowledge upon which to base suggestions for administrative methods. They know nothing whatever about surgery, and consequently could not possibly be the agents through which surgery could be standardized.

DR. ROBERT L. DICKINSON, Brooklyn: I believe we could standardize the best way to tie a stitch. You know it, and I know it. It can be worked out mathematically. There are men like Dr. Crile who can best tie a stitch. But how does Dr. Crile do it? Galbreath would

take moving pictures of Dr. Crile's stitch-tying and through these pictures teach the profession how it is done. That is simply an example of many things that can be standardized by efficiency methods.

DR. EDWARD N. BRUSH, Towson, Maryland: I feel somewhat at a loss among surgeons, but I am not wholly at a loss among hospital superintendents. We talk about hospital superintendents, hospital physicians, and hospital surgeons, but we must now go back a little and talk of hospital boards. I was told when I was placed in charge of a hospital that it was my duty to educate the board. I have been doing that for 25 years, but I have not yet finished the job. There are many varieties of hospital boards but the only worthy board is one which realizes at heart its responsibility.

A great deal has been said about incompetent surgeons operating in hospitals. Yes, and incompetent physicians also attend cases. This is a vital point which I believe hospital boards frequently do not recognize. The average hospital board does not select the best men for its staff and therefore does not provide the best care for its patients. Again, the hospital board should see to it that the hospital is supplied with competent nurses, and that the hospital superintendent should look after the general management of the hospital in an efficient way. That is a wise way of approach to better hospitals. We must remember that boards of trustees feel through their pocket-books. They do a great deal of philanthropic work and social service work, but most of them are business men, and they talk in business terms of dollars and cents.

Some years ago I was requested by the mayor of a city to visit a charity hospital in that city. After making an inspection which lasted two days, I was invited to take dinner with the board, and after the dinner, the mayor, who presided, said some pleasant words about me and my philanthropic zeal in coming to visit the hospital without pay. Then he asked me to say something. It is unpleasant to take dinner with people and then criticise. But I told the members of the board of that hospital that their need lay quite beyond philanthropy. I said, "You have been talking about taking care of the poor people of your city, but you do not realize you are wasting much of your opportunities and of your funds. You have not an efficiency engineer in your hospital. You are caring for patients at three times the necessary cost per day

per capita. With efficient management you will give better service at less cost." To do efficient work in a hospital it is necessary to instill ideas of efficiency into the board of managers.

A word about hospital superintendents. I do not believe a hospital superintendent can be trained in a school any more than a nurse or a doctor can be trained by correspondence. The superintendent must learn by practical experience, by a great deal of it. If you can induce the heads of your large hospitals to take promising young men into their offices, to give them ward duties and administrative duties, to train them as administrators, pointing out to them that the hospital business is an attractive and worthy life work, then, and only then, will you train hospital superintendents.

DR. FREDERICK W. ZIMMER, Rochester, New York: I have here an extensive report of three hospitals. This report was authorized by the Municipal Research Bureau of Rochester, New York, by Mr. George Eastman of Rochester. Mr. Eastman not only organized this Bureau of Municipal Research but he also turned his attention to three of our hospitals. He rebuilt for us the Rochester General Hospital. He gave money liberally to two other Rochester hospitals. But, first, as a business man, he wanted to know about these hospitals. This report is, in my judgment, worthy of consideration in your plan of standardization. It is full of excellent ideas and suggestions. It is a report that does not spare facts. I am on the staff at the Rochester General Hospital. It does not spare me. On the other hand, it gives us credit for the good things we do. I am proud to feel that it is work done along the lines we are now contemplating.

If you allow me, I shall read one or two pages from this report relative to the results of surgical efficiency.

"It must be recognized at the outset that the adoption of such a plan may meet with some opposition from surgeons themselves, and that the recommendation itself will be called 'impracticable.' The argument will be raised also by the hospital that surgeons will take their patients to a hospital where such records are not kept. This, of course, might happen, and the hospital would lose revenue, but other considerations outweigh the loss of revenue. The surgeon who takes his patients to other hospitals, admits by so doing that he is unwilling to stand comparison with his fellows; in other words, he admits his own weakness. Certainly the hospital which adopts records and standards of efficiency will

ultimately reap the benefit, for the patient himself will demand to be taken to the hospital which takes care to insure competent treatment.

"The keeping of such records will stimulate rivalry on the part of the staff surgeons, and that is always a good thing when the result aimed at is the proper care and treatment and cure of the sick.

"It is suggested that this record be applied to staff surgeons first. Ultimately it should be applied to all surgeons who operate in the various hospitals. The hospital confers a real privilege upon surgeons when it permits them to use its facilities; it should have the right therefore to know the quality of their work, since defective work reflects upon the general efficiency of the hospital. The contention of the physician who argues that the hospital has no right to records of his private patients, although they are treated in the hospital, should not be supported.

"Attempts to put such records into use would be of no avail unless the clinical histories of patients are made standard and completely filled out. If this were done it would not be difficult for an intelligent librarian to make out the efficiency records for submission to the board of directors. If the board of directors says that further investigation should be made, such investigation should be made by a special committee of the medical staff appointed for that particular investigation only and without the knowledge of the medical staff as a whole. The committee should make its investigation thoroughly and secretly on the basis of the records in each case, and should make a recommendation to the board of directors as to action to be taken. The board of directors should be careful to select in each case a committee of the staff members which will be unbiased and unprejudiced, for there is grave danger that injustice might be done to certain surgeons by a carelessly selected committee of investigation."

DR. CLEVELAND H. SHUTT, St. Louis: Fifteen years ago, I dare say, the standardizing of medical colleges appeared quite an insurmountable problem. But it was not insurmountable. It was accomplished largely through judicious publicity, through the force of enlightened public opinion. It seems to me that the same force must ultimately be brought to bear upon the standardization of hospitals. It will again succeed. Some few of us recognize the weaknesses of our hospitals in this country. But we must convince the majority of our whole people of these weaknesses. We are all human, boards of

directors, superintendents, and patients: All of us hope to do the right thing, but we do not all know what the right thing is. Many boards of directors do not know what the right thing is. It seems to me if we could arrange to educate and to enlighten these boards of directors we would make headway. Now I suggest that we begin by educating boards of directors to desire competent superintendents. It seems to me that the American College of Surgeons, with all its power and influence, should center its efforts on this particular aim.

DR. A. J. OCHSNER, Chicago: In the first place, I want to say that your Chairman has for years been dreaming of a conference like this. He has been interesting the Fellows of the American College of Surgeons throughout the country in hospital standardization. Every one of them was interested, and the result of their interest will be obvious when you compare hospital conditions today with the hospital conditions three or four years ago. Personally, I have observed that in all the hospitals which I have had the opportunity to visit critically, the authorities of those hospitals have felt that something was bound to happen similar to that which happened to the medical colleges during the investigations that were made some years ago. They are consequently keen to look for defects in their organizations. They are still looking for defects, and they are correcting them, and after you return to your homes you will find they will look even sharper than they looked before. I am confident, too, that the hospital authorities have found their investigation stimulating instead of depressing to them. The fact is that in the last three years much quiet progress has been made.

Let me emphasize the need now that we bear in mind the possibility of eliminating the enormous waste which exists among hospitals. If we consider the money that has been expended in these various hospitals for the care of patients, and consider the educational benefits that could have thereby been given to medical students, to interns, to assistants, we must realize that hundreds of millions of dollars' worth of educational advantages are lost.

Now, there are three directions in which this body can be of tremendous influence in eliminating such waste in the future. The first is through publicity to direct the attention of these institutions to the value of their educational by-product. You know that in manufacturing industries the by-products are of tremendous

importance. In fact, sometimes their value almost equals the entire profit. If through publicity we impress upon hospital authorities that their educational by-products must be saved for the younger portion of the profession, then we shall have benefited both the institutions and the profession.

The next point I wish to make is this: Among hospitals which take a genuine and personal interest in the education of the interns and assistants, the value of the services of these young men is multiplied many times. For instance, let us take the matter of case-record writing. You will find that some hospitals have well written records. In such instances you will generally find that the staff members take the time to study these records, to review and to discuss them with the interns who write them. What is the use of writing the record of a case if no one pays any attention to it? If the members of the staff do not take a sufficient amount of interest to consider these records of value, then they are more or less deficient in their diagnoses. In institutions where staff members take pains always to make written diagnoses, the interns receive training worth while in diagnoses. Such training is our responsibility. It is of the greatest importance. I think the most damnable institutions which I have ever seen are training schools that eliminate the personal interest. We are to be congratulated on the efforts that have been made by Mr. Bowman at this time.

DR. HENRY H. SHERK, Pasadena: Just a word in regard to the California eight-hour law that Miss Goodrich referred to several times. This eight-hour law has been enforced for three or four years; it has many good points and some deficiencies. The law was enacted as a result of the commercialized hospital that accepted day nurses. There were some hospitals in California that used their nurses up to eighteen and twenty hours a day. Those hospitals were run as commercialized institutions, and the nurses received no salary at all during their education. They were put on special cases and kept on them. They were assigned to special duties during the greater part of their student life. The hospitals collected twenty-five dollars a week for their services. That was the primary cause for the eight-hour law. The hospital with which I am connected uses the eight-hour scale and it has worked out successfully. It does not allow us to use our nurses as special nurses. They get no training in that way. They have no chance to act as special nurses, which is a great loss to

HOSPITAL STANDARDIZATION

them. We are trying to have the law repealed or changed so that nurses can have three years in special work. All of the nurses just entering service in our hospital are graduates of classical colleges.

DR. GEORGE H. SEXSMITH, Bayonne, New Jersey: In the early part of the meeting the laymen of our organization gave us valuable points that have also been touched upon in the last paper and by Dr. Shutt. These points have to do with the relations between the board of directors and the physicians. In the standardization of hospitals, to my mind, these matters are very essential. We have three forms of hospitals, so far as boards of directors are concerned in this country: First, the one in which two or three members of the board are medical men; second, the one in which practically all the members are medical men; and, third, the one in which medical members are excluded.

Why is it that we have so many hospitals in which no medical men are on the board? Is it because of lack of confidence or due to a feeling that medical men are too secretive, or because the relation existing between the public and the profession is not as it should be? Surely laymen feel that we are too secretive. One of the best things that could happen here today would be to have with us a large number of the hospital directors of this country. We must work in the open.

A few years ago in the institution in which I am a member of the staff, we had a new superintendent and she proposed to give a report each month of what happened in the hospital. She wrote out what she proposed to do. She put down the death list. The medical staff said, "Well, I would leave that out; I would not give that information to the board of directors." She was not very easily influenced. In the second month she read off eighteen deaths from the surgical side. I was one of the members of the board of directors. I heard one layman whisper to another, "Eighteen on the surgical side dead." The minute the report was read I said to the members, "I am glad this report has been read because it enables me to come to an understanding among the members of the board. We have two medical men on the board of directors and unless such things are read these members may think we are trying to put something over on the quiet." I told the members of the board I would explain why these men died. Twelve of them died within 24 hours. They worked for large industrial organizations. They were badly injured and died in consequence of

the severe injuries they had sustained. Then I explained how the other six deaths occurred, for I was on duty. I did not cover up a single thing, and then I said to them: "This is a new departure, but there is no reason why you should not be taken into our confidence; there is no reason why as a board of directors you should not know what is happening in the hospital." Now that course has done a wonderful lot of good. There is no reason why the board of physicians or medical staff should not have the confidence of the board of directors of a hospital, and the board of directors have the confidence of the physicians. What business organization or board of directors is there in this country which spends money for any project and which is not allowed to know the inside workings of the organization?

One more point: Great work can be done in standardizing hospitals, as I can tell you from practical experience. My own state of New Jersey has a law to the effect that no man can practice medicine in the state until he has had at least one year of practical experience in a standardized hospital. The standardizing of hospitals was then given over to the state medical society which appointed a committee to act. This committee visited our hospitals when we were not expecting them. When the committee came the best thing we thought we could do was to give them a good beefsteak dinner. We wanted them to be happy. [Laughter.] What they thought of the institutions I do not remember, but inside of six months all of our hospitals were in much better condition. Within three months we had increased facilities. We had trained assistants in the operating room and sufficient help in the way of nurses. We asked for a night superintendent and night nurses and got them. The board told us that we never asked for them before. I explained why we asked for them now; that we did not ask for them before because we did not have the money.

What are you going to do with hospitals that have no medical men on the board? The board of directors should be educated by the physicians who are on the staff. You cannot go out and lecture to them, but if the members of the board of directors have the right feeling and take great interest in the work they can be educated by one or two members of the staff.

DR. F. GREGORY CONNELL, Oshkosh, Wisconsin: Just a word or two in relation to the utilization of the clinical material of the smaller hospitals for teaching purposes as carried out in the

state of Wisconsin. This field has recently been included in the extension work of the University of Wisconsin. The University has organized a department in which a teacher from the clinic at the University goes out to the smaller towns and holds two-day meetings with the local profession at a local hospital. The plan is to hold morning and afternoon clinics, and one evening session devoted to a didactic lecture. The experiment has been most highly gratifying and successful. It seems a logical way of getting light upon all hospital problems. By this means we shall further utilize our clinical material for teaching purposes.

DR. R. W. CORWIN, Pueblo, Colorado: It has been mentioned in this discussion that we should have a moving picture of Dr. Crile when tying a knot. I have watched him tie these knots, but he does it so rapidly that I cannot follow his fingers, and I would like to have a moving picture with one of those attachments that you can back up and make repeat. [Laughter.]

Dr. Carrel has taught us to speed up with re-

gard to the healing of wounds. I wonder if it is possible for us to speed up with regard to the teaching of nurses. There is one thing I think we sometimes forget, and that is that patients should be considered first, not the doctor, not the student, not the nurse. As long ago as 1881 I posted in our hospital a large placard which reads, "Who shall be considered first in this hospital? The patient." That placard has been posted in the hospital ever since that time. It is being copied by other hospitals.

I should like to know from Miss Goodrich whether it would be possible for us to have nurses start their course in high schools, in colleges, and in other institutions of learning, and take their eight hours of study first, or part of it at least first? And when they come to begin the practical work for the next two years would it not be practicable to let them work eight hours and play eight hours, and sleep the other eight, instead of work eight hours and then study eight hours. I find it is a failure to ask them to study eight hours after they have had eight hours of hard work.

III. APPROACH TO HOSPITAL STANDARDIZATION

NOTE.—The committee appointed by the American Hospital Association to co-operate with the College in its plan of hospital standardization consists of Dr. Winford H. Smith, Superintendent, Johns Hopkins Hospital, Baltimore; Dr. Wayne W. Babcock, Superintendent, Grace Hospital, Detroit; and Dr. Frederic A. Washburn, Superintendent, Massachusetts General Hospital, Boston. None of these men was able to be present at the Conference. Dr. Babcock and Dr. Washburn are in France, and Dr. Smith is on duty in the Surgeon General's office in Washington. At the suggestion of Dr. A. B. Ancker,

President of the Association, Mr. Asa S. Bacon, Superintendent of the Presbyterian Hospital, Chicago, was invited to speak on behalf of the American Hospital Association. Mr. Bacon presented a questionnaire in which he outlined the data concerning hospitals which, in his judgment, should be gathered together as a first step toward standardization. Mr. Bacon's paper called forth considerable discussion. The data submitted by him were later revised by the General Hospital Committee, of which Mr. Bacon is a member, and will at an early date be distributed, hence are not here included.

ON BEHALF OF THE CATHOLIC HOSPITAL ASSOCIATION

FATHER C. B. MOULINIER, S.J., MILWAUKEE
President Catholic Hospital Association

ICOME here with a great deal of diffidence, not only because of what I have heard and seen today, but because of my usual attitude towards the medical profession and its wonderful work. I came here with a written paper, and I am con-

strained, after looking it over this afternoon, to throw it aside and just say to you what rises in my mind and flows out from my heart, in regard to the momentous problem before this great committee "the standardization of hospitals, what to do, first step."

HOSPITAL STANDARDIZATION

Standardization, as I understand it, means systematization and unification. It means the bringing together and co-ordination of the elements involved in the thing to be standardized. You are endeavoring to standardize hospitals. Hospitals are only one phase of the subject. You will never standardize hospitals, unify and systematize them, except by unifying and systematizing the art of medicine, the healing art. To systematize, standardize, unify, and make co-operative an art is a rather new thing in life. Art by its very nature is individual. It partakes of personal impulse and thought and imagination, and yet in an art like medicine, the healing art, the art that aims to do for the human race what it most needs—prevent, alleviate, cure disease—is unquestionably something that must be standardized in the sense of being unified, systematized. Why? Because it is one of those life arts, useful arts, which is based upon absolute laws, the laws of physics, of mechanics, of chemistry, and of the great body of biological laws. Music is based simply on the laws of sound, one phase of physics. So you are attempting to unify, to systematize an art, a difficult thing in itself, but more difficult, almost unattainable, when you consider the tremendous complexity of science that is back of art, of the natural sciences. Consequently, as I see it, this standardization that we are talking about and in regard to which we are trying to do something here and now, and to indicate some of its first steps, is the bringing of all kinds of people in this country to think alike. We can think alike about physics, chemistry, and mechanics, because these laws are fixed and definite; we can think alike in regard to some of the fundamental laws of biology because they are well settled; but to think alike as to how to apply that great complex of laws called the science of medicine to the prevention, alleviation, and cure of disease is a great big task that I am inclined to think will in its final accomplishment reach away into the distant years. The fact is, however, we cannot bring about complete unification of thought because medicine is so young a science, so young a system, if you will pardon

the expression, in its modern up-to-dateness, because of the great discoveries that have been made in fundamental facts and laws of biology; but there is much that can be done to make us all think alike, and we are talking about what to do, "the first step." And how are we going to think alike? It was mentioned here today, and I shall mention it again and dwell on it with some emphasis. I think the American College of Surgeons, the American Medical Association, the American Hospital Association, the Catholic Hospital Association, the Association of Licensing Boards, the Association of American Medical Colleges, the Association of Nurses, and the whole American public must be taken into this process of unification of thought—thinking, right, clear, sure, scientific thinking on the tremendous problem of the standardization of hospitals, or standardization, unification and systematization of the practice of medicine—the art of medicine. Do not try to accomplish this through publications in the medical or technical journals alone, but through other and wider propaganda.

I am going to submit a practical suggestion to Mr. Bowman, that he get some of the most keen, attractive writers in this country, who write for the various magazines, to prepare articles on this subject for the *Saturday Evening Post*, *Collier's* and a few others of the world-noted magazines.

My dear friends, there will never be an effective systematization, unification, or standardization of hospitals until the public begins to think as the doctors think, in broad outlines, and until the public begins to think as you think, the full personnel of hospitals will not think that way effectively.

It has been said here today that the problem you have is somewhat like the problem of standardizing medical colleges. It is, but it is also very different. You did not have the whole public to deal with in the matter of standardizing medical colleges except as eager to see it done, rejoicing at the breaking up of what was designated as "the commercial schools," but when you try to standardize, to revolutionize perhaps, a hospital in a community where all the people like that hospital,

where the medical profession thinks it is pretty nearly right, where those who handle it, politicians or private individuals, or religious bodies, think it is pretty nearly right, you will have to bring some pressure to bear from the outside. If the people say, "Here is a great publication in New York, another one in Philadelphia saying that our hospitals are wrong; that they are not doing for us what they claim to do; that they are not preventing or alleviating disease or curing our sick as they should be doing; we had better look into it and see about it." Then you have the interest of every human being that has regard for his health, and we all have; you have every human being eager, when informed about it, to see that the hospital or hospitals do their best; that they be up-to-date, in present-day medicine and surgery and in caring for patients.

Therefore, in order to make us all think alike, as far as human beings can be brought to think alike, there must be a tremendous pressure, a national pressure so to say, upon the minds of people to tell them in clear, sure, unmistakable terms, in the most incisive English that our best writers can command, that so and so must be done in order to make this small or this great hospital what it should be. The people have a right to demand that it shall be of a certain standard. Of course, this may take years to accomplish. I believe it will, but there is a sure means of bringing about the result, it seems to me, for once you convince the American people or the thinking public, in all the localities where there are hospitals, and there are very few worth while localities in America where there are not hospitals, all the rest will follow. The staffs on these hospitals will be what they should be as far as they can become so. This will be done by leaders, whoever they may be—the public, politicians, religious people—any individuals who take an interest in this work. Hospitals will be brought up to a standard by the pressure of truth, of truth that will be getting into the minds of everybody to make them think as they should, and once the mind is convinced, everything else follows. Feeling, impulse, prejudice, vice, selfish interests, even on the part of the politicians, will disappear, and everybody will realize that this hospital

with which they are connected, which is in their midst, is a human institution, a human welfare institution, with one of the greatest and most sacred responsibilities of any institution of the community. They will, therefore, do all they can to make it right, to make it what it should be; and once public feeling is aroused in the matter psychological action easily follows. Then there will not be needed this patient, unselfish, long-suffering effort on the part of the leaders of the profession, to drag along with them the sluggish followers of the profession, the unappreciative managers and controllers of the hospitals. Everybody will then follow spontaneously, readily, and perhaps even become leaders when before they were very hesitating followers.

You over-nice members of the medical profession, perhaps, as you listen to me will say, "Oh, that is advertising; that is making much of ourselves; that is telling the people what great individuals we are, and to what a wonderful profession we belong." My dear friends, tell the truth, whatever it be, and the truth is that you are a profession upon which the health of our whole people and of the race depends. Why not say so? If you do not want to, then keep a non-medical man at the head of the American College of Surgeons, and put non-medical men at the head of allied institutions and hospitals. Let us tell the people what we know to be true about the medical profession, and then the standardization of hospitals will be a very easy matter. All that will come quickly after this long process has been gone through. Then there will be in the atmosphere, right down in the minds and hearts and determined wills of everybody, that they shall have what is their due. The smallest hospital will then give to the patients that go to it the best that the local profession can furnish and if their knowledge and experience are not sufficient money will be provided to secure further help and equipment.

There is no cause so basic as the cause of health. We all know it. The great trouble is that we have not convinced the general public that the legitimate medical profession itself, in its private and in its institutional practice in hospitals, is the only body of men

who can give it, and that suggests another thing which I will crave your indulgence to say a few words about.

A large proportion of the great American public, certainly too large a proportion, is calling for the alleviation and cure of its ill health, and prevention of the onset of sickness, at the hands of the illegitimate therapeutic practitioners, the rapidly increasing, ignorant, quackish, dishonest body of men who are practicing drugless therapeutics throughout the length and breadth of our land. You know that. I know it. You know and I know that there is some scientific law beneath their practice — just how much I do not know, and perhaps nobody knows, but there is some. There are laws of physics being used, laws of mechanics being used, perhaps some laws of chemistry, and certainly some of the laws of biology — bio-physical and bio-mechanical; and there is a good deal of alleviation of ill health. Whether there is any absolute cure wrought by these people or not I do not know. Of course we know that infections of any kind are not reached by any of these bio-physical and bio-mechanical treatments, but the public in great numbers, people of high intelligence and of wealth, in thousands upon thousands are seeking health from these people, and they are being told every day in almost every newspaper in the land what is being done for them, and what can be done and what will be done by the chiropractor, by the osteopath, and by the other various physical, hydro, electro-therapeutists. How is the poor ignorant public that does not know the fundamental laws, to know about the process of bacterial infection, and that it may be only rest that cures after treatment by a chiropractor or an osteopath? The poor public does not know that it may be psychological, hypnotic, a reaction of the mind on the physical conditions of the body which is doing it all. How, I say, is the American public to know that? If they are to get a real, true, scientific, honest treatment by way of prevention or alleviation or cure of their ill health, they must go to a scientific man, an honest man, a legitimate professional man. Many of them never take this step until the profession in

one way or another makes it easy for them to see and understand that there will be no further excuse for ignorance, superstition, and for their willingness to be humbugged, which is characteristic of the American temperament and disposition. Now, I claim, until the medical profession as a great body takes hold of the question from the point of view of education and spreads the right gospel throughout the country, unless they get the money to have the right kind of instruction given out to the public, unless they also do something to hinder this untruthful, deceiving, dishonest propaganda, one of the great missions of the medical profession will not be performed. It cannot be performed unless there is a nation-wide movement for the health even of those who at present do not seem to want to be really cured but want to be humbugged.

As to "what to do"; after we have instructed the general public, and while doing that, have instructed ourselves more and more, all of us who are interested in the progress of medicine, in the health of the country, should likewise be interested in the standardization of hospitals. We must instruct members of the profession. Not long ago, as President of the Catholic Hospital Association, I visited some 16 or 20 hospitals, and to my amazement and distress, I found that many of the members of the medical profession were the real obstacles to progress. They did not want to be disturbed. They were interested financially in not being disturbed, and they did not want their social dignity in the community impaired. They did not seem to know what the leaders of the medical profession were doing here in Chicago and in other great medical centers. They did not know much about what the American Medical Association was doing in regard to hospital standardization. They did not have anything but words of scorn for the American College of Surgeons at that time. They rather smiled at my attempt to bring about a real staff organization. They gave me generally the impression that they would rather be left alone. They had been going on for possibly 15, 20 or even for 40 years, were getting along nicely, were making a competence, and were enjoying life and doing

some good. There is a tremendous amount of this, if I may generalize from my small experience throughout the country. Such men I apprehend do not read much that is printed in the Journal of the American Medical Association. I am certain that the surgeons of that type whom I met were not, and never will be, members of the American College of Surgeons. They are not in close touch with the licensing boards of the state. They think that schools that are making efforts to raise their standards are keeping out a drove of men who would otherwise go to them, and that in their attempts at getting higher standards, they are injuring a lot of young men. We know that this is utterly wrong and absolutely false, and such men are trying to turn aside from the great stream of progress that is going on—progress for the benefit, for the welfare, for the health of all of us. Now, that condition must be remedied in some way or other. I do not know just how. Perhaps some of this publicity that reaches the farthest throughout the country will do it. Perhaps there will be devised a way of reaching the members of your profession who are away from the medical centers, who are not moving in the great march of scientific progress, and there are many such.

Then this education I speak of must reach into the nursing schools, into the sisterhoods, into the high schools and colleges from which come the superintendents of the schools for nurses, because naturally all of them are interested in this forward movement, and all feel the truth and force that is back of the movement. There will be little accomplished by one man or set of men who are

on the staff unless they are commanding men, men of strength, dominating those in the community. Much may be done in a small hospital, in a small community, by a strong, forceful man; but there are larger communities to contend with, larger hospitals, where it will take more than one man, more than a few men in a state. There must be a method of getting into the individual home so to speak. In this great movement, as in war, we must have organization.

I attended a ward meeting last Monday night, and the ward was organized into a ward committee with its chairman. Each precinct had its chairman and precinct committee, and each block had its one or two individuals to go into every home and make people realize the absolute importance of buying Liberty Bonds. [Applause.] We are not going to fight or win *this* war unless we meet the conditions, unless we have a similar organization for instruction, for information and for inspiration that will reach every American home. It seems to me that is one of the things we must do, one of the first steps we must take in the standardization of hospitals. With that first step accomplished, the succeeding steps will be easy and will soon carry us up to the pinnacle, to the finished art of medicine, just as perfect and as definite as man can work out by the application of those fundamental laws according to which we all move and live and have our being; the laws of bio-physics and bio-mechanics, chemistry and biology. No greater mission can face any body of men than the enlightenment for health of people of America, and that is your great privilege, your great honor, your great mission. [Loud applause.]

THE MEDICAL SCHOOLS AND HOSPITAL STANDARDIZATION

By E. P. LYON, PH.D., M.D., MINNEAPOLIS
Dean of the Medical School, University of Minnesota

I TAKE it that the medical school has four primary interests in hospitals from the standpoint of teaching: (1) for the training of nurses, (2) for the training of undergraduate medical students, (3) for the training of interns, and (4) for the training

of graduate students or specialists. Besides these there is the interest in research, as much a function of a university as teaching; also the interest which the medical school as a quasi-public institution and standardizing agency should have in medical practice as a whole.

This last function the medical school has failed almost wholly to realize. In universities which have thoroughly organized extension divisions for academic, agricultural, and business subjects nothing at all is done for medicine beyond the undergraduate course. The interest in research is not accompanied by an equal interest in spreading the practical results of such investigations among the active physicians. The stirring appeal of Dr. Kanavel made here today should carry conviction to every medical school of its duty to the physicians of its part of the country.

This is all that I shall be able to say on the public side of medical school activities. I turn to the more specific educational activities already enumerated.

In only a few cases is the school for nurses a part of a university and division of a medical school. It is so at Minnesota; and I think the relation leads to higher standards and better teaching. Evidently the universities or medical schools cannot make themselves responsible in any large degree for nursing education unless they are willing to affiliate with a good many hospitals. Any movement in this direction is bound to be slow and meet opposition. Probably the medical schools can at present best improve nursing education by assisting in the standardization of the hospitals for the higher phases of medical education. But surely the need of better standards of nursing education is apparent when scrub maids in one hospital—girls with less than a grammar school education—are transmuted overnight into pupil nurses in other hospitals.

Unless something is done to maintain standards the nurse will be about as much entitled to be called a member of a profession as a barber is to be called an artist. Furthermore the exploitation of the pupil nurse in private duty in amount out of proportion to educational values and for the benefit of hospital income is indefensible—as bad, indeed, as if the medical schools should send their seniors on *locum tenens* duty and pocket the fees. Your committee on hospital investigation for all these reasons will collect data in regard to nursing education.

The second interest of medical schools in hospitals is connected with undergraduate medical education. Naturally this affects directly only those hospitals, comparatively few in number, located near and in some way attached to the medical schools. Fairly adequate data as to the ideals to be striven for by such hospitals have been formulated through the discussions of the Council on Medical Education, the Association of American Medical Colleges, and other agencies. Every medical faculty is alive to the need of adequate and well controlled clinical facilities. Every university has, or is striving for, a hospital or hospitals so related to the institution as to be as distinctly teaching and research assets as are its laboratories of physics and biology, its libraries, its shops, or its experimental farms. It is all a problem of materials and men.

A problem of materials and men! Which should be mentioned first?

From the time of Virgil men have sung *arma virumque*. In our educational conferences *arms* have come first. We have talked of laboratories and equipment, of hospitals and number of patients, a good deal more than of professors and staff. And now in your proposed work of hospital standardization I see the same tendency. In a recent publication I note that standardization will be a good thing as it will lead hospitals to correct their architecture, improve their plumbing and perfect their administrative machinery. Ye Gods! Let us begin by inverting the formula of Virgil! *Viriarmaque*, be our motto! Hospital standardization like medical school standardization is primarily, even 90 per cent, a problem of the staff.

If you attempt to grade hospitals you must give the staff the biggest place on the score card. You must find means of evaluating men and apply the standards rigidly. I think that in addition to the general questionnaire to the hospital, there should be a separate sheet for every staff member which should bring out all the facts relative to his training, experience, society membership, ethical standards, etc. I think you must have credible witnesses to the scientific character of his work. Every university has

definite methods of evaluating and selecting men. These methods are not so objective and statistical as those used in inventorying a laboratory, but they are fairly effective. They can be used, moreover, just as well in hospitals. I, therefore, bespeak on the part of your committees a most careful study of the staff as a basis for the standardization of hospitals. It is *the very most important thing to be done.*

Naturally I have little to say on the side of "arms"—material, equipment, etc. However, that they also are important is apparent to all. The material the hospital furnishes is sick people. From the standpoint of teaching, the adequacy of this material is of great importance, secondary indeed only to the nature of the material. One cow might be sufficient to enable the agricultural student to learn how to study cows, and something about *a* cow. But several cows, and several kinds of cows, are necessary if he is to know *cows*. The clinic, adequate in number and kinds of disease, is the same thing from the medical standpoint.

Finally, the contact of student and material is fundamentally important. We all laugh, nowadays, at the old-fashioned physics laboratory with the sign, "Students must not touch the apparatus." Nevertheless many medical schools are still struggling with the problem of adequate and properly controlled contact of students and patients—a fundamental proposition in modern medical education.

Hospital standardization organized on right ideals of teaching ought to correct that difficulty. I urge that data on this subject be sought from every hospital where students are taught.

What does the medical school have to say on the subject of the "closed" hospital? Well, every university should be a forum for the presentation of truth. I am willing to go a long way in this regard in order that students may have the broadest possible opportunities. Nevertheless, when it comes to expert service and systematic teaching you cannot open the doors to everybody. Do you think you could teach physics in a laboratory where everybody was invited

to come and carry on experiments? No more can you teach medicine in a hospital where every doctor is invited to carry on his experiments. Whatever may be true elsewhere, the university hospital must have a closed staff.

As I have indicated, however, our hospital problem, from the standpoint of undergraduate medical education, is rather special, and I shall say no more about it.

We come now to the problem of the intern.

When I got to this point in my writing, I leaned back in my chair and let my musing motor run free—"idle" is the technical term. "Lo! the poor intern, whose untutored mind," it began but could get no further. Presently it made another start: "Lo! the poor intern, whose untutoring staff"; but again the spark failed, and the machine came to a dead stop.

So I came back resolutely to the inquiry whether this matter of interns is one in which the medical school really has any active interest? I think it has and ought to have such an interest. I do not feel that the school has discharged its responsibility when it examines and certifies its graduates on the content of the usual curriculum. Medicine stands in too vital a relation to human life. The engineer does not build big bridges until he has a lot of experience building little ones. But the medical man beginning practice may be called upon for just as vital judgments as the oldest practitioner (a condition, by the way, that ought not to exist and which group medicine would largely eliminate).

Now, either the graduate of the usual four-year curriculum is trained and safe, or he is not. Practically all of you say he is not. If he is not trained and safe he needs further education. The moment you advocate that this further training should be in a hospital and not in private practice, you admit that it should not be self-training but should be controlled and directed. And you say by implication that someone should control and direct, in other words, *teach*. But this is just where the rub is located. We put young graduates into your hospitals as interns and nobody teaches them. They are left to run at their own sweet wills, provided they don't

get in the way of the machines — either the administrative machine or the medical machine, each of which rolls through the institution on its hurry-up schedule—and provided, also, that they (the interns) do a certain amount of routine work. Nobody is responsible for their education. They gather crumbs, as it were, from the rich man's table — chiefly the operating table! But so far as systematic or intensive training is concerned, they do not get it. Released from the more rigid discipline of the medical curriculum they cease to be students. A lot of them just loaf around until their year is over so that they can get their certificates and get located and get money and get married.

I think some of you will say, "These interns are through with their scholastic education. They must learn to educate themselves. Let them watch and learn. Let them learn by doing." Regarding this, it seems to me clear enough that if they learn by doing, either they've got to have the critical guidance, in other words, the teaching, that I am pleading for or else the patients will suffer. Moreover, this learning by doing which is so much praised (and rightly so), has the natural weakness that most students have neither the imagination nor the groundwork to see the implications and principles which are needed to cement the facts of experience into real knowledge.

The other day a young fellow came up to enter the academic department of our university and found he lacked just half a credit of meeting the requirements. He is headed eventually for medicine and so came to tell me his troubles. I found that he had been working for a year and a half in the physiologic laboratory of one of our leading institutions. I suggested, therefore, that he take an examination in elementary physiology, which could give him the desired entrance credit. He undertook this readily and told me that he could put a cannula in the jugular or carotid of a dog, find the sciatic nerve, dissect out the thyroid, apply artificial respiration by the Meltzer method, etc. He told me, moreover, that in addition to animal work he had helped in more than fifty human autopsies. Yet when I questioned him he

could not tell how the blood passed through the heart, nor the difference between arterial and venous blood, nor why we breathe, nor what the pancreas is for, nor why the dog's leg was paralyzed when he cut the nerve. Mind you, for eighteen months this boy — a high school graduate and reasonably bright — had worked side by side with an accomplished experimental physiologist; and the one had not had the inspiration to find out for himself nor the curiosity to inquire; while the other had failed utterly to grasp the opportunity of teaching. There was the cup of knowledge all full and sparkling in his hand, but he did not think to pass it. He lacked the instinct to teach.

This is, I admit, an extreme case. Still I am sure the principle holds good as regards interns in many hospitals. When I ask our boys about one well-known diagnostician of the Twin Cities, they say, "He's clever, all right, but we never get anything out of him; he never tells us anything."

I am back again, you see, pounding away on the same old front — the same old trenches buttressed with the same old sandbags of indifference, defended by the same old hyphenated company, Captain Not-my-job, Lieutenant Too-busy. I am pleading not for capable, well-trained, honest men on the staff, for every other interest here represented will plead for that; I am pleading rather for teachers on the staff; I am pleading that every hospital, so far as the intern is concerned, shall be a teaching hospital; I am pleading that it is a duty of the staff to teach, a duty of the trustees to appoint men to the staff who will teach; I am pleading that this duty to teach the intern is second *not at all* to the duty to the patient, because it is an indirect duty to the generations of patients yet to come and certainly an immediate duty to insure the best service to the patient of today.

I have spoken of teaching as instinctive. Yes, there are men to whom teaching is as natural as breathing. But most teaching, and probably the best teaching, is conscious and deliberate. I am pleading that the hospital staffs consciously undertake their teaching obligation to the intern, as they

consciously take up their other duties connected with the hospital and with the practice of medicine. I do not say that the intern needs formal lectures, but I do say he needs inspiring leadership. He needs to have his eyes opened to all the world around him; his imagination quickened to perceive what is beyond present seeing. He needs to have his footsteps led now forward to the new and the unknown, now backward to that repository of truth, the library, with its records of research, biography and medical history. I do say that every hospital staff should be a medical faculty. I do say that the man who has nothing to bring to others, has nothing to bring to a hospital, and has no place on its staff. I plead for the teaching function of a hospital as co-ordinate and co-equal with its other functions, and I demand a high valuation of this function in the standardization of hospitals. I demand that data on the education of interns be sought and evaluated by your committee and investigators.

If you admit my contention you really admit all the other things that make up a standard hospital from the medical school standpoint. As regards the intern for example, if you are consciously teaching him you can report to the medical school on his progress. You can certify whether or not his service has been satisfactory. (Heretofore, so far as I can see, all an internship certificate amounted to was a statement that for so many months Doctor X lived under a hospital roof without a knock-out fight with the superintendent.) If the internship certificate is to amount to anything educationally, it must be granted by the staff; and the superintendent should have no more to do with it than the registrar of a college has to do with its diplomas.

If the staffs of hospitals accepted seriously their educational responsibilities the fifth or intern year could be made a universal requirement for the M.D. degree. This requirement, Minnesota, Rush, and a few other schools are attempting to enforce, but are meeting great difficulty owing to the surprisingly small number of hospitals where any training acceptable from an educational standpoint is afforded to interns. We can accept credits

from one Class A medical school to another, knowing that in most cases the variation in standards is within reasonable limits. But when it comes to the required intern year I am confident that the educational values vary all the way from a Johns Hopkins standard to that of the lowest proprietary medical college. The schools, generally, cannot adopt the fifth year until the hospitals are standardized. Nor will a state board intern year requirement (as in Pennsylvania) have definite meaning until such hospital standardization is brought about. I may be pardoned, perhaps, for emphasizing again that such standardization must be based less on "arms" and more on men than those so far undertaken.

When you consider how much the medical school fifth year requirement would do for the hospitals in keeping the intern on the job, maintaining his scholarly attitude, etc. (inasmuch as his M.D. degree would depend on good work in the intern year)—when you consider these matters, you surgeons should recognize how great is your duty to bring proper conditions as regards intern training into your hospitals. Nor is this duty wholly altruistic, for you all know how much the success of your work depends on the intelligence, training, interest, faithfulness and hard work of the intern. The first and fundamental change required before hospitals can be standardized—I repeat again—is a recognition on the part of the staff of their educational responsibilities. If they aren't fit to teach, if they don't know modern medicine, they aren't fit to be on the staff. I for one should like to see the time when every staff man in any important hospital, however remote from a university campus, might be worthy of and might have an academic rank.¹

So much for the staff and the interne. What does the medical school suggest as to the laboratory? In the first place the medical school, interested in education and research, cannot look upon the laboratory as accessory and secondary. It must be co-ordinate with the other departments. It must

¹ See paper on "Graduate Education in the Clinical Branches and the Minnesota Experiment." J. Am. M. Ass., Oct. 20, 1917.

have equal quarters, equal equipment, equally trained men in charge. What would you think of a medical school that had competent surgeons, pediatricists, etc., and took any wandering doctor as anatomist or physiologist; or worse still, put these departments in the hands of undergraduates, which is practically what a hospital does when it places interns in charge of the laboratory? Moreover, what would you think of a medical school with a full staff of clinical specialists and just one lone teacher for pathology, chemistry, bacteriology, serology and experimental physiology, to which in some cases X-ray might be added for good measure? That's about the way most hospitals balance up as regards the laboratory. Medical schools speak proudly of their Laboratories, and use the capital letter; hospitals speak doubtfully of their laboratory in the singular number, and with a little "l."

This has got to be changed, and again it is largely a question of men. Can you expect medical graduates to go into pathology, bacteriology, chemistry, etc. for a life work, at the salaries available? You want laboratories whose results you can depend on? Then don't expect one poorly-paid man to have expert knowledge of three or four fully developed sciences. When you can speak of your laboratory staff and your clinical staff as co-ordinated and equally well trained, in the same way that a properly organized medical school speaks of these divisions of its work, then you will have hospital organization that amounts to something. As regards equipment, you can safely do as the medical schools have learned to do — get the men and let them get the equipment their work and methods demand.

Some of these ideas regarding the laboratory, I believe, must be in the minds of your committee that visits and evaluates hospitals; and data must be gathered regarding the hospital laboratory and its staff.

Moreover, the intern as a student (not as a servant) must have access to laboratory facilities. From an educational point of view the common rotation plan by which an intern spends certain weeks in the laboratory apart from cases and certain other weeks in

the wards with no laboratory obligations is certainly wrong. He should do the standard routine laboratory work on his cases all the time.

And right here let us ask what should be the relation of the intern to the patients. From the medical school standpoint the patient is the material the student studies. If you shut up the patient in a private room and tell the intern to keep out, you are firing that intern out of school. In a hospital where this is the practice the intern gets no real training. He is usually the unpaid anaesthetist and beyond that a kind of glorified and albino orderly.

Even in private hospitals it is possible to give interns access to all the cases. The tactful staff man has no difficulty in doing this. Only the self-confessed incompetent will object when he recognizes his teaching obligation to the intern. The medical school cannot approve an internship for fifth year credit in a hospital where any other condition prevails, nor should the investigators who visit hospitals on behalf of hospital standardization.

As to autopsy service the experience of the Mayo Clinic¹ shows what can be done even with a strictly private clientele. It is almost superfluous to point out that from the medical school standpoint a good autopsy service is indispensable. Only with the student or the interne (who is a student) at hand to note and to criticize, and with the pathologist just in the rear with his searchlight, is the medical man forced to his best efforts and the patient protected to the highest possible degree. It is only in such conditions that the student is likely even occasionally to free himself from the barnacles of empiricism and dogma which, more than any of us suspect, encrust the practice of medicine, even in this so-called scientific era.

The hospital library we may look at from the same point of view. If the hospital is a school then the sources of knowledge as found in printed books must be there. They must be there for the same reasons that they are found in other schools: first, to tell us what is the present state of truth and what is the

¹ See article by Dr. L. B. Wilson, *J. Am. M. Ass.*, 1915, lxiv, 1560.

history of truth; second, to point the way to new truth. Neither good teaching, in the narrow sense of passing on the facts, nor research can possibly get along without a library. Every hospital should also have working arrangements with a medical school library or some other great collection by which books can be gotten on loan.

This arouses the pertinent query why almost every state supports great law libraries to which the lawyers of the state have free access, and practically none of them, outside their state university medical schools, support any medical libraries. The doctors have the influence to swing this thing and see that adequate collections of medical literature are available for the profession in every American commonwealth.

What says the medical school regarding case histories and other hospital records? It says that such records are the basis alike of good teaching, of all research founded on numbers and averages — the statistical method — and finally of the best work for the individual patient. It says that the clinical, just as the laboratory scientist, must stand or fall on the written evidence of his work. Each of these points might readily be expanded, but I shall stop only to emphasize once more that quantitative data are far more valuable from a statistical point of view than qualitative impressions and that, in my opinion, many medical problems will

not be settled until ways are devised of measuring and recording phenomena at present recognized in merely a qualitative way. Here is an opportunity for the best brains of those who will work out the details of hospital standardization—record blanks, etc.

I cannot consider in detail the problem of graduate medical education or the training of specialists in which medical schools are becoming so much interested of late. Suffice it that the same ideals and standards are essential as in the teaching of interns. But the instruction demanded must be more individual and much more intensive.

I am going to stop right here with the interest of the medical schools in hospitals from the standpoint of research still unconsidered, though recognized as a rich ground for discussion and a richer one for real work. I only picture a possibility. Suppose for the last quarter century every case in every hospital had been studied properly, recorded properly, individually and statistically examined properly — and by "properly" I mean only what was reasonably possible from the knowledge and facilities of the times. Do you not believe that many an important truth still buried from our eyes would be open and plain and in practical use for the healing of the sick? I believe this and I condemn myself and all of us by that belief and by that admission, for we have not done all that we could.

IV. COMMITTEES ON STANDARDS

PERSONNEL BY STATES AND PROVINCES

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| Francis C. DuBose William McD. Mastin John H. Blue John H. S. Davis John Neilson Furniss Harry T. Inge | James Monroe Mason Jesse G. Palmer Edmund W. Rucker, Jr. Charles A. Thigpen Isaac L. Watkins Cunningham Wilson |
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| John Elmer Bacon Francis Eppes Shine | Charles J. Rowan W. W. Pearson Lee Wallace Dean John C. Rockafellow |
| ARKANSAS | KANSAS |
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COMMITTEES ON STANDARDS

53

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| Fred T. Murphy | Howard Hill | John J. Buchanan | Chevalier Jackson |
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| Howard Lilenthal | Frederick W. Zimmer | | |
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| Hubert A. Royster | Jacob F. Highsmith | John M. Maury | George Manning Ellis |
| Charles W. Banner | Robert Barnard Slocum | Richard Alexander Barr | Duncan Eve |
| Charles Moore Strong | | Lucius Edward Burch | Samuel Rush Miller |
| NORTH DAKOTA | | TEXAS | |
| Robert D. Campbell | Murdock MacGregor | James E. Thompson | Howard R. Dodgeon |
| Eric P. Quain | Alexander J. McCannel | Bacon Saunders | John Thomas Moore |
| | | Frank Cooke Beall | Arthur Carroll Scott |
| William E. Lower | André Crotti | W. Launcelot Brown | W. Burton Thorning |
| Charles S. Hamilton | Christian R. Holmes | Ira Carleton Chase | Charles Scott Venable |
| James Fairchild Baldwin | Julius H. Jacobson | | |
| L. G. Bowers | Florus F. Lawrence | | |
| Charles Edwin Briggs | John Chadwick Oliver | | |
| Frank E. Bunts | Roland E. Skeel | | |
| Martin Stamm | | | |
| OKLAHOMA | | UTAH | |
| LeRoy Long | Edmund S. Ferguson | Samuel C. Baldwin | Robert S. Joyce |
| Robert M. Howard | Walter Hardy | J. W. Aird | Harry N. Mayo |
| Thomas Maze Aderhold | John S. Hartford | Frederick Stauffer | |
| Ralph Vernon Smith | | | |
| OREGON | | VERMONT | |
| K. A. J. Mackenzie | Luther H. Hamilton | John B. Wheeler | Henry Crain Tinkham |
| Robert C. Coffey | George S. Whiteside | Alan Davidson | William W. Townsend |
| | | | |
| VIRGINIA | | WASHINGTON | |
| | | Stuart McGuire | Lomax Gwathmey |
| | | Southgate Leigh | Hugh Henry Trout |
| | | Robert C. Bryan | Stephen H. Watts |
| | | Achille Murat Willis | |
| WEST VIRGINIA | | WASHINGTTON | |
| | | James B. Eagleson | Caspar Wistar Sharples |
| | | Henry B. Luhn | Horace J. Whitacre |
| | | George Monroe Horton | Park Weed Willis |
| | | | |
| | | Frank LeMoine Hupp | John Egerton Cannaday |
| | | Arthur P. Butt | William Wolfe Golden |
| | | Robert Jeffrey Reed | |

HOSPITAL STANDARDIZATION

| | | | |
|--------------------|---------------------------|----------------------|-----------------------------|
| | WISCONSIN | | NEW BRUNSWICK |
| Gilbert E. Seaman | Edward Evans | George C. Van Wart | Walter W. White |
| Curtis A. Evans | Reginald Henry Jackson | | |
| F. Gregory Connell | John Lawrence Yates | | |
| | WYOMING | | NOVA SCOTIA |
| Willard C. Foster | Herbert Taylor Harris | Henry K. MacDonald | Philip Weatherbe |
| | | | |
| | DOMINION OF CANADA | | |
| | ALBERTA | | ONTARIO |
| Edgar W. Allin | Ludwig S. Mackid | Irving H. Cameron | D. J. Gibb Wishart |
| Frank H. Mewburn | | Hadley Williams | B. P. Watson |
| | | A. T. Shillington | |
| | BRITISH COLUMBIA | | PRINCE EDWARD ISLAND |
| Alexander S. Monro | Herbert W. Riggs | Stephen Rice Jenkins | |
| O. M. Jones | | | |
| | MANITOBA | | QUEBEC |
| Jasper Halpenny | W. Harvey Smith | James A. Hutchison | W. W. Chipman |
| W. A. Bigelow | | Edmond M. von Eberts | Zephyr Rhéaume |

